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# FY23 Grundwasserabstrom-sicherung CCAN104 / TS3

## Jahresbericht Betriebsjahr 1

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## Bericht für

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## Revisionen des Dokuments

| Nr. | Details | Datum |
|---|---|---|
| 01 | Entwurf | 05.12.2025 |
| 02 | Endbericht-Vorabzug | 17.12.2025 |
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# Zusammenfassung und Zweck des Berichts

Hintergrund des Projekts ist eine Boden- und Grundwasserbelastung mit Per- und Polyfluorierten Alkylsubstanzen (PFAS) im Bereich eines ehemaligen Feuerlösch-Übungsplatzes auf dem Flughafengelände in Katterbach (Standort „CCAN104“). Gemäß der Sanierungsplanung aus dem Jahr 2023 [4] mit dem Ziel das Abströmen von mit PFAS belastetem Grundwasser aus dem Kasernengelände zu verhindern, wurden ab Frühjahr 2024 Entnahmebrunnen für belastetes Grundwasser errichtet. Ferner wurde ein unterirdisches Leitungsnetzwerk von den neuen Entnahmebrunnen, sowie von bestehenden umgebauten Messstellen zu einer Reinigungsanlage (TS3) zur Behandlung des verunreinigten Wassers vor dem Abschlag in ein Oberflächengewässer, verlegt. Die Reinigungsanlage TS3 für das geförderte Grundwasser vom Standort CCAN104 wurde am 15. Oktober 2024 im Betrieb genommen.

Neben der Überwachung des abgereinigten Wassers aus TS3 sind auch eine Überwachung der Grundwasserqualität aus bestehenden und neuen Grundwassermessstellen, sowie eine Dokumentation der Grundwasserstände in den Messstellen Bestandteile des in der Sanierungsplanung vorgesehenen Grundwassermonitorings. Drei, außerhalb des Kasernengeländes gelegene Grundwassermessstellen sind gem. [8] in das Monitoringprogramm aufzunehmen, damit die Verhinderung des Abstroms von belastetem Grundwasser vom Kasernengelände in den Außenbereich kontrolliert werden kann.

Die Ergebnisse der Untersuchung des ersten Betriebsjahres der Wasserförderung bestätigen die Wirksamkeit der errichteten hydraulischen Abstromsicherung bei CCAN104, sowie die Reinigungsleistung der Reinigungsanlage TS3. Die Überwachung der Anlage TS3 weist relativ hohe PFAS Konzentrationen im Rohwasser auf. Nach einer initialen Phase stellt sich jedoch dabei ein kontinuierlich rückläufiger Trend der Konzentrationen an PFOS und PFAS ein. Im Verlauf des Betriebs der Anlage kam es dabei zweimal zu einem Auftreten von PFAS im Reinwasser auf, wobei lediglich bei einer Probenahme (der Einleitgrenzwert für PFAS (gesamt) von 0,2 µg/L mit 0,34 µg/l leicht überschritten wurde. In beiden Fällen wurden Maßnahmen zur Reduzierung der Konzentrationen (Filteraustausch bzw. Hinzuschaltung des Aktivkohlefilters) vorgenommen. Im Anschluss lagen die PFAS Konzentrationen im Reinwasser wieder unter der Nachweisgrenze.

Die Anlage TS3 wies einen durchschnittlichen Wasserdurchsatz von 1,4 $m^3/h$ (= 0,39 l/s) auf. Über die gesamte Betriebszeit zwischen Oktober 2024 und September 2025 ergibt sich somit eine geförderte und abgereinigte Wassermenge von ca. 12.100 $m^3$. Die im wasserrechtlichen Bescheid der Stadt Ansbach aufgeführten maximalen Durchsätze von 3,6 $m^3/h$ wurden eingehalten. Aus den geförderten Wassermengen ergibt sich eine entfernte PFAS Gesamtmasse von ca. 246 g für TS3.

Die Grundwasserstände am Standort CCAN104 weisen nach Beginn der Wasserförderung auf die Ausbildung eines Absenktrichters im Bereich der beiden Grundwasserförderbrunnen GWM 37 und GWM 70 hin. Die Verlagerung des Konzentrationszentrums zur GWM 80 in dem Bereich zwischen den beiden Grundwasserförderbrunnen GWM 37 und GWM 70, liefert eine zusätzliche Indikation für den Einfluss des veränderten Fließregimes durch den Pumpbetrieb.

Die gemessenen Wasserstände deuten darauf hin, dass auch Wasser unmittelbar außerhalb der Kaserne von der hydraulischen Sicherung erfasst und das Abströmen von Grundwasser vom Altlastenstandort CCAN104 verhindert wird.

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Ein Jahr nach Implementierung der hydraulischen Abstromsicherung, sowie der Reinigungsanlage zeigen sowohl die Messstellen am Flugfeld, als auch das Wasser in der Reinigungsanlage TS3 PFAS Konzentrationen, die einen Weiterbetrieb der Anlagen erfordern. Daher ist der Betrieb der hydraulischen Abstromsicherung mit TS3 entsprechend des bestehenden Konzeptes und der Genehmigungen fortzusetzen.

Mit diesem Jahresbericht zur Vorlage bei der Stadt Ansbach werden die Vorgaben in den Punkten 1.2.8 und 1.2.9 des Bescheids der Stadt Ansbach vom 18.07.2024 [14] erfüllt. Die Ergebnisse des Betriebs der Wasserreinigungsanlage, sowie die Ergebnisse des Grundwassermonitorings aus dem ersten Betriebsjahr (Oktober 2024 bis September 2025) gem. Wasserrechtsantrag vom 23.05.2024 [15] werden dokumentiert. Neben der Ergebnisdarstellung und Auswertung umfasst der Bericht auch Handlungsempfehlungen für weitere Maßnahmen.

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# Abkürzungsverzeichnis

| | |
|---|---|
| AKW | aromatische Kohlenwasserstoffe |
| BBodSchV | Bundesbodenschutzverordnung |
| [redacted] | [redacted] |
| BTEX | Benzol, Toluol, Ethylbenzol und Xylole |
| CC | Compliance Cleanup |
| CKW | chlorierte Kohlenwasserstoffe |
| COC | Chain of Custody (Begleitschein) |
| CSM | Konzeptionelles Standortmodell |
| DO | dissolved oxigen (gelöster Sauerstoff) |
| DOC | dissolved organic carbon (gelöster organischer Kohlenstoff) |
| FS | Feasibillity Study (Machbarkeitsstudie) |
| Geb. | Gebäude |
| gem. | gemäß |
| GOK | Geländeoberkante |
| kg | Kilogramm |
| l | Liter |
| lfd m | laufende Meter |
| LfU | Bayerisches Landesamt für Umwelt |
| LHKW | leichtflüchtige halogenierte Kohlenwasserstoffe |
| m | Meter |
| $m^3$ | Kubikmeter |
| Mn | Mangan |
| $NO_3$ | Nitrat |
| NN | Normalnull |
| SU/FS | Sanierungsuntersuchung und Machbarkeitsstudie |
| PFAS | per- und polyfluorierte Alkylsubstanzen |
| PFBA | Perfluorbutansäure |
| PFBS | Perfluorbutansulfonsäure |
| PFHxS | Perfluorhexansulfonsäure |
| PFOS | Perfluoroctansulfonsäure |
| PRD | Relative prozentuale Differenz |

[redacted] [redacted]

| | |
|---|---|
| QA/QC | Qualitätssicherung / Qualitätskontrolle |
| SOW | Leistungsbeschreibung |
| TDS | Gesamtgehalt gelöster Feststoffe |
| TOC | total organic carbon (gesamter organischer Kohlenstoff) |
| TS | Treatment System (Reinigungsanlage) |
| USAG | United States Army Garrison |
| [redacted] | [redacted] |
| µg/l | Mikrogramm pro Liter |

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# 1 Einleitung

Die [redacted] wurde von der [redacted] mit der Durchführung von Umweltdienstleistungen für das Projekt FY23 USAG Ansbach Grundwassersanierung an den Compliance Cleanup (CC) Standorten (Sites) CCAN104 in der Katterbach Kaserne, United States Army Garrison (USAG) Ansbach, Deutschland beauftragt. Alle Arbeiten wurden gemäß der Leistungsbeschreibung (SOW) „FY23 USAG Ansbach CCAN104 and CCAN126 Groundwater Remedial Action USAG Ansbach Germany“ vom 06. Juli 2023 erbracht.

## 1.1 Projekthintergrund

Innerhalb der Katterbach Kaserne wurden an verschiedenen Standorten erhöhte PFAS Konzentrationen im Grundwasser nachgewiesen. Am westlichen Rand des Flugfeldes im Bereich der ehemaligen Feuerlöschübungsplätze, in der Nähe des Gebäudes (Geb.) 5508 (Standort CCAN104) wurden in der Vergangenheit verschiedene Untersuchungen der erhöhten PFAS Belastung vorgenommen [1] [2] [3] [4] [5].

Im Bereich des Standorts CCAN104 wurden dabei PFAS Konzentrationen von >27 µg/l im Grundwasser und >100 µg/kg im Boden festgestellt [3]. Das Zentrum der Grundwasserkontamination wurde im Bereich der Messstellen GWM 37, GWM 40 und GWM 70 detektiert. In einer Machbarkeitsstudie empfahl die Fa. Wood (2019) [3] eine Sicherung durch hydraulische Abstromkontrolle entlang der Liegenschaftsgrenze, sowie die Stabilisierung des Schadens im Boden mittels ex-situ Beimischung eines Adsorbens. Im Juni 2023 wurde von AECOM eine Planung für eine entsprechende Abstromsicherung [4] vorgelegt. Teil dieser Planung war eine Pilotversuchsstudie zur Auswahl von geeignetem Filtermaterial für den Betrieb der Wasserreinigungsanlage [7]. Dabei wurden ein synthetisches Material zum Ionenaustausch als geeignetes Filtermaterial vorgeschlagen. Die Stadt Ansbach stimmte dem darin aufgeführten Vorgehen in ihrer Stellungnahme vom 21. Juni 2023 grundsätzlich zu [8].

Im Frühjahr 2024 wurde mit den Arbeiten zur Einrichtung der hydraulischen Abstromsicherung begonnen. Dazu gehörte die Errichtung der Förderbrunnen für Grund- und Sickerwasser am Standort CCAN104, die Errichtung einer Reinigungsanlage (TS3), sowie die Installation der für den Betrieb notwendigen Leitungen und Infrastruktur. Im Oktober 2024 erfolgte die vollständige Inbetriebnahme der Reinigungsanlage, sowie der hydraulischen Abstromsicherung. Als Einleitstelle für das abgereinigte Wasser in das Oberflächengewässer „Katterbach“ war die Einleitstelle „E4“ vorgesehen.

## 1.2 Projektziele

Gegenstand des Projektes ist der Betrieb der Wasserreinigungsanlage, welche das geförderte Wasser aus den Entnahmebrunnen am Altlastenstandort CCAN104 vor der Ableitung abreinigen. Die Anlagen werden auf ihre Funktionsfähigkeit, sowie die Sicherstellung des Abreinigungsziels überprüft.

Daneben erfolgt die Kontrolle der hydraulischen Abstromsicherung am Standort CCAN104 durch regelmäßige Abstichmessungen und Beprobungen ausgewählter Messstellen im Bereich des Standortes.

# 2 Standortbeschreibung

## 2.1 Projektstandort

Der Projektstandort, CCAN104, befindet sich im westlichen Teil der Katterbach Kaserne der USAG Ansbach. Die Kaserne besteht aus eingezäunten Flächen beidseitig der Bundesstraße B14 in Ansbach, Deutschland (s. Übersichtslageplan, **Anhang A.1**).

Der Standort CCAN104 (s. **Anhang A.2**) befindet sich südlich der B14 ca. 230 m südlich des Geb. 5508 (Hangar 5) und innerhalb des inneren Flugfeldzauns. Die Grundwasserentnahmebrunnen und -messstellen befinden sich überwiegend auf dem Kasernengelände innerhalb und außerhalb des Flugfeldzauns. Auch im Grundwasserabstrom außerhalb des Kasernengeländes befinden sich Messstellen („Off-Post" Messstellen). Grundwasser aus den Entnahmenbrunnen und Messstellen am Standort CCAN104 wird über ein für das Vorhaben verlegtes unterirdisches Leitungsnetzwerk aus Druckleitungen mit rund 600 lfd m zur Reinigungsanlage TS3 geführt, die auf einer neu installierten Betonplatte neben dem Regenüberlaufbecken, nördlich des Gebäudes Nr. 5801 installiert wurde (s. **Anhang A.3**)

Die Topographie ist im Bereich des Flugplatzes mit einer Höhe von ca. 463-465 m über NN in der Regel relativ eben und horizontal. Das Untersuchungsgelände liegt nicht innerhalb eines Natur- oder Landschaftsschutzgebietes.

## 2.2 Lokale Geologie und Hydrogeologie

Die oberflächennahe Geologie des Gebiets ist durch eine Deckschicht aus unverfestigten Sedimenten gekennzeichnet, einschließlich einer dünnen Schicht aus Oberboden, gefolgt von künstlichen Füllmaterialien und/oder natürlich gewachsenen sandigen Böden. Die Grundgesteinssedimente gehören zur triassischen Haßberge Formation, die aus zwei ähnlichen Sandsteineinheiten besteht, dem Blasensandstein (kbl) an der Basis, und überlagernd dem Coburger Sandstein (kc). Im Raum Ansbach besteht der Blasensandstein aus rötlich-braunen bis grauweißen, feinkörnigen bis mittelkörnigen Sandsteinen mit zwischengeschalteten Tonsteinschichten bzw. Linsen ("Zwischenletten"). Unter dieser Formation folgen Letten mit Mergelbänken der Lehrberg Einheit ("Lehrbergschichten" (kl)) [9].

Im Raum Katterbach bildet der Blasensandstein den wichtigsten lokalen Grundwasserleiter. Die Grundwasserströmung innerhalb der Sandsteine erfolgt überwiegend entlang von Schichtflächen und Klüften. Höhergelegene Wasserlinsen können auch in geringeren Tiefen über eingeschalteten diskontinuierlichen Tonsteinlinsen auftreten. Die Lehrberg-Einheit fungiert als Grundwasserstauer für den darüber liegenden Blasensandstein-Aquifer.

Die Katterbach Kaserne liegt auf einer ausgedehnten Hochebene, die von sanft in alle Richtungen abfallenden Hängen umgeben ist. Aufgrund dieser topographischen Bedingungen kann für die Liegenschaft grundsätzlich von einer radial nach außen gerichteten Grundwasserströmung in alle Richtungen ausgegangen werden. Die Hauptquellen und Bäche entspringen an der Grenze zwischen den Blasensandstein- und Lehrberg-Einheiten. Die Bäche, die an der Basis des Blasensandstein-Aquifers entspringen und radial von der Liegenschaft abfließen sind: der *Hirnbach* (Norden), der *Rippbach* (Nordosten), der *Milmersbach* (Südosten), der *Eichenbach* (Südwesten) und der *Katterbach* (Nordwesten) [9].

Die Oberkante des Blasensandsteins befindet sich im Untersuchungsgebiet bei Geb. 5508, in einer Tiefe von ca. 4 bis 5 m unter der Geländeoberkante (u. GOK) [2]. Wie während der Sanierungsuntersuchungen [2], [3] festgestellt, liegt der Grundwasserspiegel in diesem Gebiet bei 7 - 10 m u. GOK mit Höhenlagen zwischen 455 und 458 m NN. Aussagefähige Grundwasser-

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gleichenpläne lassen sich aufgrund des unterschiedlichen hydraulischen Potentials der einzelnen Messstellen auf diesem Standort nur schwer erstellen. Die Geomterie der Schadstofffahne lässt jedoch auf ein hauptsächlich nach Nordwesten gerichtetes Fließregime schließen [7].

# 3 Gesetzliche Anforderungen und Bewertungskriterien

Im August 2023 traten die Änderungen in der Bundes-Bodenschutz- und Altlastenverordnung (BBodSchV), die im Juli 2021 veröffentlicht wurden, in Kraft. Diese Verordnung regelt die Bodenuntersuchung und die Beurteilung von Schadstoffkonzentrationen in der ungesättigten Bodenzone [10]. Eine entsprechend aktualisierte Fassung des Bayerischen Merkblatts Nr. 3.8/1 "Untersuchung und Bewertung von Altlasten und schädlichen Bodenveränderungen - Wirkungspfad Boden-Grundwasser" [11] wurde vom Bayerischen Landesamt für Umwelt (LfU) im Mai 2023 veröffentlicht. Dieses Merkblatt enthält Hinweise zur Durchführung von Boden- und Grundwasseruntersuchungen und zur Bewertung des Wirkungspfades Boden-Grundwasser für Altlasten in Bayern. Es setzt die Änderungen um, die in der Novelle der BBodSchV vom Juli 2021 enthalten sind [10].

Die "Leitlinien zur Bewertung von PFAS" wurden in Bayern zuletzt 2025 aktualisiert (LfU, Februar 2025) um eine einheitliche Bewertung von PFAS in Lebensmitteln, Trinkwasser, Wasser und Boden zu ermöglichen [12]. Diese Richtlinie weist darauf hin, dass die Ergebnisse aus Grundwasser-untersuchungen nach den bereits im Bayerischen Merkblatt Nr. 3.8/1 (Mai 2023) [11] beschriebenen Kriterien bewertet werden.

## 3.1 Grundwasser

Das Bayerische Merkblatt Nr. 3.8/1 [11] definiert die Kriterien nach denen die Ergebnisse von Grundwasseruntersuchungen bewertet werden sollen. Im Folgenden sind die wichtigsten Bewertungskriterien zusammengefasst.

- Überschreitungen der Stufe-1-Werte deuten auf eine schädliche Veränderung des Grundwassers hin. Bei der Beurteilung des Bedarfs an weiteren Maßnahmen ist aber auch zu berücksichtigen, ob die Schadstofffracht dauerhaft unter den Werten der geringen Schadstofffracht liegt und die Grundwasserbelastung "lokal begrenzt" ist. Sind alle Kriterien erfüllt, gelten weitere Maßnahmen in der Regel als nicht verhältnismäßig. Ist eines dieser Kriterien nicht erfüllt, sind in der Regel weitere Maßnahmen erforderlich.

  Überschreitet die Konzentration im Grundwasser auf einer Fläche von mehr als 1.000 $m^2$ den Stufe-1-Wert, kann die Grundwasserbelastung nicht als "lokal begrenzt" angesehen werden.

- Bei Überschreitung von Stufe-2-Werten ist der Bedarf an Sanierungsmaßnahmen zu prüfen. Bei Schadstoffkonzentrationen oberhalb der Stufe-2-Werte und einer gleichzeitigen Überschreitung der Werte für die geringe Schadstofffracht sind in der Regel Sanierungsmaßnahmen erforderlich.

Befindet sich die Schadstoffquelle teilweise oder vollständig in der gesättigten Zone, wird die Schadstofffracht in der Regel als die Menge an Schadstoff im unmittelbaren Abstrom der Schadstoffquelle berechnet, die durch das Grundwasser pro Zeiteinheit in einer Referenzebene transportiert wird. Die Schadstofffracht sollte so nah wie möglich an der Schadstoffquelle, aber auch so weit wie nötig von der Schadstoffquelle entfernt berechnet werden, um die gesamte, im Grundwasser fließende Schadstofffahne zu erfassen. Für weitere Einzelheiten wird auf die Kapitel 1.2 und 2 des Anhang 2 des Bayerischen Merkblatts Nr. 3.8/1 [11] verwiesen.

Nur wenn die Schadstoffquelle ausschließlich in der ungesättigten Zone liegt, kann die in das Grundwasser eingeleitete Schadstofffracht als die Menge an Schadstoffen berechnet werden, die durch Sickerwasser pro Zeiteinheit im Übergangsbereich zwischen der ungesättigten und der

gesättigten Zone transportiert wird. Näheres ist den Kapiteln 1.1.1 und 2 im Anhang 2 des Bayerischen Merkblatts Nr. 3.8/1 [11] zu entnehmen. Insgesamt müssen die Parameter, die für die Berechnung der Schadstofffracht und der Flächenausdehnung der Kontamination im Grundwasser herangezogen werden, hinreichend konservativ gewählt werden.

Darüber hinaus wird im Bayerischen Merkblatt Nr. 3.8/1 [11] darauf hingewiesen, dass selbst bei der Entnahme von Grundwasserproben aus dem belasteten Bodenbereich aufgrund von Verdünnungsprozessen die Schadstoffkonzentration im Grundwasser nicht mit der Sickerwasserkonzentration im Übergangsbereich zwischen der ungesättigten und der gesättigten Zone gleichgesetzt werden kann. Werden jedoch die Stufe-1-Werte im Grundwasser an einer Messstelle, die sich im belasteten Bodenbereich oder abstromig davon befindet überschritten, muss davon ausgegangen werden, dass auch der Prüfwert (PW) (Eluatwert) im Sickerwasser im Übergangsbereich zwischen der ungesättigten und der gesättigten Zone überschritten wird.

Die "Leitlinien zur Bewertung von PFAS" (LfU, Februar 2025) definieren Stufe-1 und Stufe-2-Werte, sowie die Werte für die geringfügige Schadstofffracht für 13 PFAS Parameter im Grundwasser [12]. Diese Bewertungskriterien sind in **Tabelle 1** dargestellt. Die Stufe-1 und Stufe-2-Werte wurden auf Grundlage der von der "Bund/Länder-Arbeitsgemeinschaft Wasser" (LAWA) im Juli 2017 veröffentlichten toxikologischen Schwellenwerte ("Geringfügigkeitsschwellen für das Grundwasser" (GFS) [13] und der von der Trinkwasserkommission des Bundesamtes für Umwelt (TKW) herausgegebenen "Gesundheitlichen Orientierungswerte" (GOW) übernommen bzw. abgeleitet.

*Tabelle 1: Stufe-1- und Stufe-2-Werte und geringe Schadstofffracht für PFAS-Parameter im Grundwasser*

| Parameter | Stufe-1 Wert (µg/l) | Stufe-2 Wert (µg/l) | Geringe Schadstofffracht (g/Tag) |
|---|---|---|---|
| Basierend auf **GFS-Ableitungen:** | | | |
| **PFNA** | 0,06 | 0,25 | 0,02 |
| **PFOS** | 0,1 | 0,4 | 0,03 |
| **PFOA** | 0,1 | 0,4 | 0,03 |
| **PFHxS** | 0,1 | 0,4 | 0,03 |
| **PFHxA** | 6 | 24 | 1,5 |
| **PFBS** | 6 | 24 | 1,5 |
| **PFBA** | 10 | 40 | 2,5 |
| Basierend auf **GOW-Ableitungen**: | | | |
| **PFDA** | 0,1 | 0,4 | 0,03 |
| **H4PFOS** | 0,1 | 0,4 | 0,03 |
| **PFOSA** | 0,1 | 0,4 | 0,03 |
| **PFHpS** | 0,3 | 1,0 | 0,08 |
| **PFHpA** | 0,3 | 1,0 | 0,08 |
| **PFPeA** | 3,0 | 12,0 | 0,75 |
| **Weitere PFAS mit $R_1$-$(CF_2)_n$-$R_2$, mit n>3** | 0,1 | 0,4 | 0,03 |

Im Bescheid der Stadt Ansbach vom 18. Juli 2024 [14] wurden die Einleitgrenzwerte festgelegt, welche bei der Ableitung des Wassers aus TS3 in die Einleitstelle E4 einzuhalten sind. Diese betragen 0,02 µg/l für den Einzelstoff Perfluoroctansulfonsäure (PFOS) und 0,2 µg/l für PFAS (gesamt). Diese Einleitgrenzwerte sind im Rahmen der Eigenkontrolle zu überwachen und bei der Ableitung in die Einleitstelle E4 einzuhalten.

# 4 Technische Anlagen und Genehmigungen

Bei den technischen Anlagen zur Abstromsicherung und Grundwassermonitoring handelt es sich um:

- Entnahmebrunnen, die teilweise neu errichtet und teilweise aus umgebauten existierenden Messstellen bestehen
- Bestehende und neue Grundwassermessstellen zur Überwachung der Grundwasserqualität und zur Überprüfung der Grundwasserstände
- Modulare Wasserreinigungsanlage TS3 neben der Einleitstelle E4

Die Messstellen und Entnahmebrunnen wurde nach dem Ausbau vermessungstechnisch nach Lage und Höhe (m ü NN) eingemessen.

Im Vorfeld der Maßnahmen wurde für den Ausbau der Messstellen und Entnahmebrunnen eine Bohranzeige nach §49 Wasserhaushaltsgesetz und Art. 30 Bayerisches Wassergesetz über die Bundesanstalt für Immobilienaufgaben (BImA) bei der Stadt Ansbach eingereicht und mit dem Bescheid der Stadt Ansbach vom 24.02.2024 (s. **Anhang F.1**) genehmigt.

Zusätzlich wurden Anträge auf beschränkte Erlaubnis zur Bauwasserhaltung gem. Art. 15 Abs. 2 BayWG bzw. Art. 70 Abs. 1 Nr. 3 BayWG für die Bohrarbeiten und erdbautechnischen Maßnahmen, sowie für den Betrieb der Reinigungsanlage TS3 über die BImA bei der Stadt Ansbach beantragt. Im Bescheid vom 27.02.2024 wurde die Bauwasserhaltung für Bohrarbeiten und die erdbautechnischen Maßnahmen erlaubt (s. **Anhang F.2**). Im Bescheid der Stadt Ansbach vom 18.07.2024 [14] wurde die beschränkte Erlaubnis zur Gewässerbenutzung für die Anlage TS3 bis 31.12.2027 erteilt (s. **Anhang F.3**).

## 4.1 Entnahmebrunnen zur hydraulischen Abstromsicherung

Am Standort CCAN104 wurden zur Erstellung der hydraulischen Sicherung insgesamt sechs flache Entnahmebrunnen bis 8 m Tiefe als Sickerwasserbrunnen (GWM86, GWM87, GWM88, GWM89, GWM90, GWM91) errichtet. Drei bestehende tiefere Grundwassermessstellen (GWM37, GWM70, GWM78A) mit Tiefen von 17,0 m, 24,5 m bzw. 13,2 m wurden zu Entnahmebrunnen umgebaut.

Die Brunnen wurden mit Pumpen zur Wasserförderung sowie Füllstandssensoren ausgestattet. Bei einem ausreichend hohen Wasserstand in den Brunnen, wird die Wasserförderung automatisch aktiviert. Zur Installation der Pumpentechnik wurden die Messstellen an der Oberfläche mit begehbaren ca. 2 m tiefen Betonschächten mit 1,2 m Durchmesser ausgebaut. Die Schächte wurden ebenerdig ausgeführt und mit abschließbaren Deckeln aus Gusseisen ausgestattet. Die Pumpen sind an Rohrleitungen angeschlossen über die das geförderte Wasser unterirdisch zu einer Sammelleitung und über diese zur Reinigungsanlage TS3 im Nordwesten der Katterbach Kaserne geleitet wird (s. **Anhang A.3**). Innerhalb der Betonschächte ist jeweils ein Hahn zur Probenahme installiert, damit im laufenden Betrieb Kontrollproben gewonnen werden können.

Die Pumpen in den Entnahmebrunnen GWM 37, GWM 70 und GWM 78A waren während des ersten Betriebsjahres durchgängig in Betrieb, wohingegen die Pumpen in den Entnahmebrunnen für Sickerwasser aufgrund der unterschiedlichen Witterungsverhältnisse und schwankender Wasserstände nur bei erhöhtem Sickerwasseraufkommen Wasser förderten.

Die Bohr- und Ausbauprofile der Entnahmebrunnen sind dem **Anhang B** zu entnehmen. Die Lage der Entnahmebrunnen sind auf dem Lageplan **Anhang A.2** dargestellt.

## 4.2 Grundwassermessstellen

Im Rahmen des Grundwassermonitoring-Programms wurden insgesamt 21 Grundwassermessstellen / Entnahmebrunnen zur Messung der Grundwasserstände und zur Entnahme von Grundwasserproben für Laboruntersuchungen ausgewählt. Ein Großteil der Messstellen waren bestehende Messstellen, die im Rahmen von Voruntersuchungen errichtet wurden. Abgesehen von den o.g. Entnahmebrunnen wurde eine Messstelle entlang der östlichen Grenze (GWM 92A) mit einer Endtiefe von 19,5 m neu errichtet und die existierende Messstelle GWM 37 wurde überbohrt und von 18,0 m auf 26,0 m vertieft.

In drei der bestehenden Messstellen (GWM 38, GWM 72 und GWM 73) wurden während der Beprobungskampagnen gemäß Leistungsbeschreibung nur die Grundwasserstände gemessen und dokumentiert.

Die Lage aller Messstellen sind auf dem Lageplan **Anhang A.2** dargestellt und die Bohr- und Ausbauprofile sind dem **Anhang B** zu entnehmen.

## 4.3 Grundwasserreinigungsanlage TS3

Im Nordwesten der Katterbach Kaserne wurde die Reinigungsanlage TS3 errichtet (s. Lageplan, **Anhang A.3**), die das aus den Entnahmebrunnen geförderte Wasser der hydraulischen Abstromsicherung CCAN104 behandelt. Die Anlage besteht aus einem Absetzbecken, einem Beutelfilter, sowie vier in Reihe geschalteten Filtrationsstufen bestehend aus einem Aktivkohlefilter (1000 L) und drei Ionenaustauschfiltern (je 240 L).

Zu Beginn der Maßnahme war der Aktivkohlefilter an TS3 nicht in den Wasserfluss integriert, sondern wurde am 05. Mai 2025 ergänzend in den Reinigungsprozess eingebunden. Nach jeder Filtrationsstufe sind Hähne für die Probenahme installiert. In der Anlage TS3 können die in den Brunnen installierten Pumpen für die Beprobung der Messstellen manuell eingeschaltet werden. Das gereinigte Wasser wird nach der letzten Filtrationsstufe an der Einleitsstelle E4 in den Katterbach abgeleitet.

# 5 Durchgeführte Untersuchungen

## 5.1 Grundcharakterisierung und Initialbeprobung

Zwischen dem 25. und 27. März 2024 wurden nach der Entwicklung der neuen Messstellen und Entnahmenbrunnen Grundwasserproben entnommen und die Wasserqualität im Rahmen einer Grundcharakterisierung gem. LfU Merkblatt 3.8/1 [11] untersucht.

Zusätzlich wurden weitere Proben aus allen Messstellen und Entnahmebrunnen gewonnen und im Rahmen einer Initialbeprobung auf die Parameter PFAS, leichtflüchtige halogenierte Kohlenwasserstoffe (LHKW), chlorierte Kohlenwasserstoffe (CKW), aromatische Kohlenwasserstoffe (AKW) mit BTEX sowie Eisen ($Fe_{3+}$ und $Fe_{2+}$), Mangan (Mn) und Nitrat ($NO_3$) untersucht.

Die Ergebnisse sind in den Tabellen in **Anhang C.5** dargestellt.

## 5.2 Grundwasser Monitoring

Den Vorgaben der Sanierungsplanung [4] und des Bescheides der Stadt Ansbach [8] folgend, wurden insgesamt wurden zwischen Oktober 2024 und September 2025 fünfzehn Grundwasserprobenahmekampagnen durchgeführt, die ersten vier Beprobungen erfolgten wöchentlich, anschließend wurde eine monatliche Beprobung für das verbleibende Basisjahr vorgenommen. Jede Probenahmekampagne umfasste die 15 Grundwasser- und sechs Sickerwassermessstellen. An den Sickerwassermessstellen war aufgrund des schwankenden Wasserandrangs nur episodisch ausreichend Wasser vorhanden um eine Probenahme durchzuführen.

Die Wasserförderung und Probenahme der Messstellen erfolgte mit elektrischen Tauchpumpen, wobei das Volumen der Messstellen mehrfach ausgetauscht wurde. Vor der Probenahme wurden die Vor-Ort Parameter des Grundwassers (Temperatur, pH-Wert, elektrische Leitfähigkeit, Redox und gelöster Sauerstoff) in einer Durchflusszelle erfasst. Grundwasserproben wurden erst entnommen, nachdem sich die Vor-Ort Parameter stabilisiert hatten. Die Probenahme in den als Entnahmebrunnen ausgebauten Messstellen (GWM 37, GWM 70, GWM 78A, GWM 86, GWM 87, GWM 88, GWM 89, GWM 90, GWM 91) erfolgte mit den für die Abstromsicherung in diesen Brunnen installierten Pumpen, sowie den in den Schächten eingebauten Probenahmehähnen. Alle Proben wurden in vom Labor bereitgestellte Probengefäße abgefüllt, vorsichtig behandelt, um Turbulenzen zu minimieren und die Bildung von Luftblasen zu verhindern. Die Proben wurden etikettiert, in luftdichte Behälter verpackt und bei einer Temperatur von ca. 4 °C gelagert. Alle Proben wurden unter Einhaltung des CoC-Verfahrens an das zertifizierte Labor [redacted] Fürth versendet.

Alle Wasserproben wurden auf PFAS (13 Parameter) analysiert. Bei jeder Kampagne wurden drei Doppelproben zur Qualitätssicherung gewonnen. Parallel zu der Probenahme auf dem Kasernengelände wurden gemäß des Bescheides der Stadt Ansbach [8] drei Messstellen außerhalb der Liegenschaft (Offpost 01-03) im Abstrom der Site CCAN104 beprobt und ebenfalls auf PFAS (13 Parameter) untersucht. Von Oktober 2024 bis März 2025 erfolgte die Organisation der off-post Probenahme durch [redacted] und die Analyse der Proben durch [redacted] Ab April 2025 erfolgte die Durchführung der off-post Probenahme durch [redacted] und die Analyse der off-post Proben durch das zertifizierte Labor [redacted]. Insgesamt wurden im Rahmen des Basisjahres 352 Grund- und Sickerwasserproben, darunter 45 QA/QC-Proben auf PFAS untersucht.

Parallel zu den Grund- und Sickerwasserprobenahmen wurden die Wasserstände an den Entnahmebrunnen und Messstellen gemessen. In die Abstichmessungen wurden auch die

Grundwassermessstellen GWM 38, GWM 72 und GWM 73 einbezogen, an denen keine Probenahme durchgeführt wurde. Aus den Wasserständen wurden Grundwassergleichenpläne erstellt um die Ausbildung eines Absenktrichters zu überprüfen.

## 5.3 Reinigungsanlage TS3

Die Anlage TS3 dient der Abreinigung des Wassers aus den Messstellen am westlichen Rand des Flugfeldes (CCAN104). Zur Behandlung des geförderten Grundwassers wurde eine Reinigungsanlage im nördlichen Bereich der Katterbach Kaserne installiert. Die Probenahme erfolgte an Probenahmehähnen welche jeweils nach den verschiedenen Filtrationsstufen installiert sind.

An der Anlage TS3 erfolgte die Probenahme in den ersten drei Betriebsmonaten wöchentlich, in den Monaten 4 bis 6 zweiwöchentlich und anschließend monatlich in den Folgemonaten. Für das Reinwasser am Ablauf der Anlage wurde jeweils eine Doppelprobe zur Qualitätssicherung gewonnen. Insgesamt wurden 95 Wasserproben, darunter 24 QA/QC-Proben, entnommen und entsprechend der in **Tabelle 2** aufgeführten Parameter untersucht.

*Tabelle 2: Probenahmeplan Reinigungsanlage TS3*

| Probenahmepunkt | Analysenparameter | Probenahmefrequenz |
|---|---|---|
| **TS3** | | |
| TS3-ROH | PFAS, Chlorid, Sulfat, Nitrat, TOC, DOC, TDS, Trockenrückstand, Säurekapazität | Wöchentlich in Monat 1 bis 3<br>Zweiwöchentlich in Monat 4 bis 6<br>Monatlich in Monat 7 bis 12 |
| TS3-MID | PFAS (13) | |
| TS3-REIN<br>TS3-REIN-QA/QC | PFAS (13) | |

Die Anlage war dauerhaft im Betrieb und wies keine Störungen im ersten Betriebsjahr auf.

Ein Betriebsmittelwechsel für die Ionaustauschfilter wurde wegen der steigenden PFAS-Konzentrationen (bestehend überwiegend aus dem Einzelstoff Perfluorbutansäure PFBA) in den MID-Filter Proben zweimal am 21.01.2025 und am 05.05.2025 durchgeführt. Während des Wartungstermins am 05.05.2025 wurde der vorgeschaltete Aktivkohlefilter an das System angeschlossen. Danach wurde die MID-Proben aus dem Probenhahn nach dem Aktivkohlefilter gewonnen.

Die durchgeführten Wartungs- und Kontrollarbeiten sind in den Wartungsprotokollen und Bautagebüchern der Firma Züblin Umwelttechnik, Schwaig bei Nürnberg, im **Anhang G** zu finden.

# 6 Untersuchungsergebnisse

In den nachfolgenden Kapiteln werden die Ergebnisse der Beprobung der Grund- und Sickerwassermessstellen, sowie der Reinigungsanlage TS3 zusammengefasst. Die vollständigen Ergebnisse können den Ergebnistabellen in **Anhang C** sowie den Prüfberichten in **Anhang E** entnommen werden.

## 6.1 Grundwasser Monitoring

### 6.1.1 Hydrologische Bedingungen

Im Vorfeld jeder Probenahme wurden an den Messstellen Abstichmessungen des Wasserstandes vorgenommen um die lokale Grundwasserfließrichtung zu ermitteln und die Entwicklung des durch die Wasserförderung entstehenden Absenktrichters zu bewerten. Die Ergebnisse der Stichtagsmessungen können dem **Anhang C.1** entnommen werden. Die Abstichmessungen wurden zur Berechnung von Grundwassergleichenkarten verwendet. Ausgewählte Grundwassergleichenkarten für das vorliegende Monitoring sind in den **Anhängen A.4.1** bis **A.4.3** zu finden.

Die Grundwasserstände während des Anlagenbetriebs zeigen, dass die übergeordnete Grundwasserfließrichtung am Standort CCAN104 nach Nordwesten gerichtet ist. Mit Beginn der dauerhaften Wasserförderung in den Grundwassermessstellen GWM 37 und GWM 70 lässt sich eine deutliche Beeinflussung des Fließregimes, mit der Ausbildung von Absenktrichtern zu den beiden Pumpbrunnen (insbesondere GWM 37) beobachten. Diese Absenkung führt dazu, dass sich lokal auch unmittelbar außerhalb der Katterbach Kaserne ein Grundwasserfluss in Richtung der Pumpbrunnen einstellt.

Durch den Betrieb der Pumpen ist an den Pumpbrunnen ein kontinuierliches, aber geringer werdendes, Absinken des Wasserspiegels zu beobachten.

### 6.1.2 Feldparameter

Während jeder Probenahme wurden die Feldparameter (pH-Wert, elektrische Leitfähigkeit, Redoxpotential, gelöster Sauerstoff und Temperatur) gemessen um die Grundwasserbedingungen am Standort zu charakterisieren.

Die pH-Werte liegen an allen Messstellen zumeist bis auf wenige Ausnahmen im neutralen Bereich zwischen 6,5 und 7,5. Bei den elektrischen Leitfähigkeiten ist die Schwankungsbreite deutlich größer, wobei sich die meisten Werte im Bereich zwischen 200 und 1000 µS/cm bewegen. Die höchsten Leitfähigkeiten wurden am Sickerwasserbrunnen GWM 88A festgestellt. Die Redox-Werte waren mit max. +160 mV insgesamt niedrig und die Sauerstoffgehalte bewegten sich bis auf wenige Ausnahmen zwischen 2 und 8 mg/l.

### 6.1.3 PFAS Konzentrationen

Im März 2024 wurde vor Beginn der hydraulischen Abstromsicherung eine initiale Beprobung durchgeführt. Dabei wurden die höchsten PFAS Konzentrationen im Sickerwasser mit >100 µg/l (109,5 µg/l in GWM 88, 156,2 µg/l in GWM 91) festgestellt. Im Grundwasser nahmen die Konzentrationen mit zunehmender Entfernung vom Zentrum im Bereich der Sickerwassermessstellen ab. Die Ergebnisse bestätigten die im Vorfeld des Projektes ermittelten Schadstoffkonzentrationen am Standort [3].

Im Verlauf des anschließenden Monitorings während der hydraulischen Abstromsicherung wurden die höchsten PFAS Konzentrationen durchgängig in der Messstelle GWM 80A (>200 µg/l) festgestellt. Sie befindet sich zwischen den beiden Pumpbrunnen GWM 37 und GWM 70. Insgesamt lässt sich an den meisten Messstellen eine stagnierende (z. B. GWM 39, GWM 78B) oder eine abnehmende Entwicklung (z. B. GWM 70, GWM 78A) der PFAS Konzentrationen feststellen.

Hauptkomponenten der Kontamination sind PFHxS und PFOS, welche zusammen in den meisten Proben über zwei Drittel der Gesamt-PFAS ausmachen. Mit Ausnahme der GWM 39 überschreiten an allen Messstellen innerhalb des Kasernengeländes die PFHxS Konzentrationen die bayerischen Stufe-1 (0,1 µg/l) bzw. Stufe-2-Werte (0,4 µg/l). Die PFHxS Konzentrationen an GWM 80A überschreiten mit bis zu 150 µg/l deutlich den Stufe-2-Wert. Auch für den Parameter PFOS sind verbreitet Überschreitungen des Stufe-2-Wertes (0,4 µg/l) von bis zu 180 µg/l (GWM 87, Januar 2025) festzustellen (**Anhang C.2**).

Neben PFOS und PFHxS sind an den Messstellen auf dem Kasernengelände noch Stufe-2-Wert Überschreitungen bei sechs weiteren PFAS Komponenten (H4PFOS, PFHpA, PFOA, PFNA, PFHpS und PFPeA), sowie zusätzlich Stufe-1-Wert Überschreitungen bei vier PFAS Komponenten (PFHxA, PFBS, PFDA und PFOSA) zu verzeichnen.

Bei den Messstellen außerhalb des Kasernengeländes weist die unmittelbar außerhalb des Zaunes im direkten Abstrom gelegene Messstelle Offpost 01 mit bis zu 26 µg/l die höchsten und die im weiteren Abstrom gelegene Messstelle Offpost 02 mit max. 0,304 µg/l die niedrigsten PFAS Konzentrationen auf. Auch an den drei Offpost Messstellen kommen Überschreitungen der Stufenwerte von verschiendenen PFAS Komponenten vor (**Anhang C.2**).

Im **Anhang C.5** sind die historischen Daten hinsichtlich PFAS-Konzentrationen im Grundwasser von ausgewählten Messstellen auf dem Kasernengelände sowie außerhalb des Kasernengeländes zu sehen. Derzeit sind keine eindeutigen Tendenzen zur Entwicklung der PFAS-Konzentrationen zu erkennen.

## 6.2 Reinigungsanlage TS3

Im folgenden Kapitel werden die Ergebnisse der Beprobung der Reinigungsanlage TS3 zusammengefasst und bewertet.

### 6.2.1 Feldparameter

Die pH-Werte des Wassers der Anlage TS3 weisen nur geringe Schwankungen auf und liegen mit Werten zwischen 6,2 und 7,3 zumeist im neutralen Bereich.

Die Leitfähigkeitswerte weisen eine insgesamt große Spannbreite zwischen 250 und 1000 µS/cm auf, wobei die gemessenen Leitfähigkeitswerte zwischen Roh- und Reinwasser an einem Probenahmetermin sich zumeist nur geringfügig unterscheiden.

Bei den gelösten Sauerstoffgehalten konnte im Monitoringverlauf eine Spanne von 0,2 bis >10 mg/l festgestellt werden. Bei den einzelnen Probenahmen waren die Sauerstoffwerte im Rohwasser zumeist höher als im Reinwasser.

Bei den Redox-Werten zeigen die Ergebnisse von Roh- und Reinwasser bei den einzelnen Probenahmen keine großen Unterschiede.

### 6.2.2 Hydrochemische Parameter Rohwasser

Neben den PFAS wurden im Rohwasser der Reinigungsanlage die Parameter Trockenrückstand, Säurekapazität, Chlorid, Sulfat, Nitrat, TOC, DOC und Gesamtgehalt gelöster Feststoffe untersucht. Diese Parameter geben Indikationen für mögliche Einflüsse auf die Leistungsfähigkeit der

Reinigungsanlage und Nutzungsdauer der Filteranlagen. Eine lückenlose Dokumentation des Probennahmevorgangs ist daher wichtig, um eventuelle Unstimmigkeiten, in der Analyse, nachvollziehen zu können. Zur vollständigen Dokumentation der Probennahme gehört daher auch die organoleptische Beschreibung der Probe.

Anlage TS3 zeigt geringe Konzentrationen von TOC und DOC die unter 3 mg/l lagen. Die Sulfat Konzentrationen liegen bis auf einzelne Ausnahmen im Bereich zwischen 25 und 30 mg/l. Die Nitrat Konzentrationen bewegen sich in einem ähnlichen Spektrum. Etwas höher ist die Schwankung bei den Chlorid Konzentrationen, die sich zwischen 45 und 90 mg/l bewegen. Beim Parameter Säurekapazität ist die Schwankungsbreite an TS3 relativ niedrig.

### 6.2.3 PFAS Konzentrationen

Die Anlage TS3 weist hohe PFAS Konzentrationen im Rohwasser auf. Nach einer initialen Phase stellte sich jedoch dabei ein kontinuierlich rückläufiger Trend der Konzentrationen an PFOS und PFAS ein (**Abbildung 1**), wobei im September 2025 im Rahmen der letzten Probenahme in diesem Berichtszeitraum ein unerwarteter Anstieg zur beobachten war

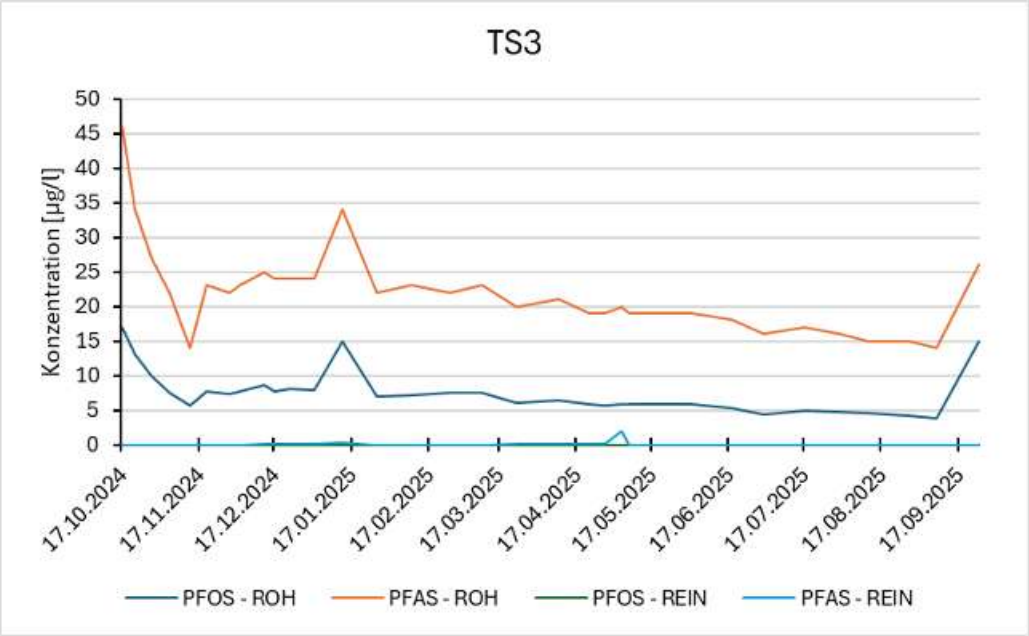



*Abbildung 1: PFAS Konzentrationen im Wasser der Reinigungsanlage TS3*

Im Verlauf des Betriebs der Anlage kam es dabei zweimal zu einem Auftreten von PFAS im Reinwasser, wobei bei einer Probenahme (13.01.2025) der Einleitgrenzwert für PFAS (gesamt) (0,2 µg/L) leicht überschritten (0,34 µg/L) wurde. Die Überschreitung wurde durch den Durchbruch der kurzkettigen Verbindung Perfluorbutansäure (PFBA) verursacht. Es wurden Maßnahmen zur Reduzierung der Konzentrationen (Filteraustausch bzw. Hinzuschaltung des Aktivkohlefilters) vorgenommen. Im Anschluss lagen die PFAS Konzentration im Reinwasser wieder unter der Nachweisgrenze.

Die Anlage TS3 wies einen durchschnittlichen Wasserdurchsatz von 1,4 $m^3/h$ (= 0,39 l/s) auf. Über die gesamte Betriebszeit zwischen Oktober 2024 und September 2025 ergibt sich somit eine geförderte und abgereinigte Wassermenge von ca. 12.100 $m^3$. Gemäß [16] sind Einleitungen aus Niederschlagswasser aus den Regenwasserkanälen von max. 110 l/s zulässig. Die erfolgte Einleitung von 0,39 l/s durch TS3 beträgt lediglich rund 0,3 % von dieser max. Einleitmenge und ist daher als vernachlässigbar gering im Hinblick auf die hydraulische Leistungsfähigkeit des Katterbachs zu bezeichnen. Die im wasserrechtlichen Bescheid der Stadt Ansbach [8] aufgeführten maximalen Durchsätze von 3,6 $m^3/h$ wurden eingehalten.

Aus den geförderten Wassermengen ergibt sich eine entfernte PFAS Gesamtmasse von ca. 246 g für TS3.

Anhand der in den Wartungsprotokollen aufgeführten Entnahmemengen wurden die extrahierten Wasser- und PFAS Mengen für die einzelnen Probenahmetermine abgeleitet. Die entsprechend ermittleten Mengen sind in der folgenden **Abbildung 2** dargestellt.

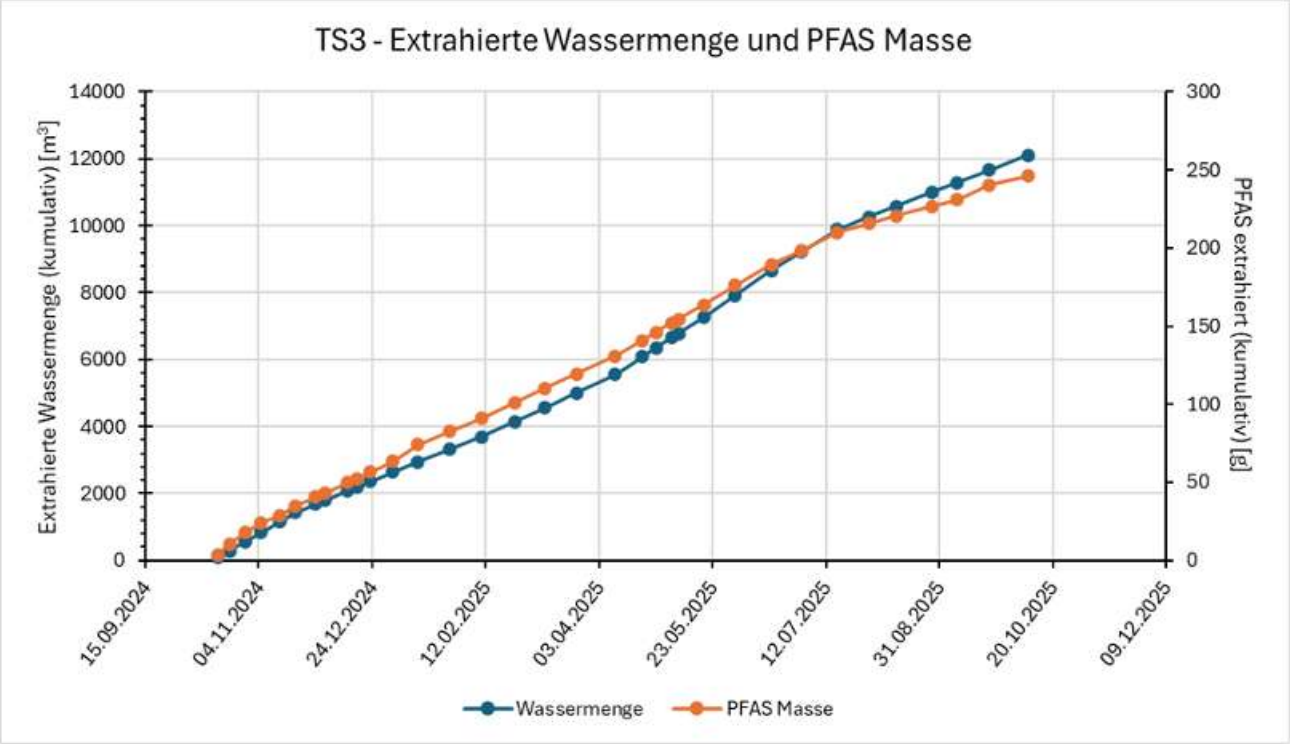



*Abbildung 2: Übersicht abgereinite Wassermenge und PFAS-Masse (Kumulativ) beginnend ab Oktober 2024.*

## 6.3 QA/QC Proben

Während der Grundwasserprobenahmekampagnen wurden insgesamt fünfundvierzig Doppelproben (drei Proben pro Kampagne) entnommen, um die Reproduzierbarkeit der Untersuchungsergebnisse zu bewerten. Die Proben wurden analysiert und die Ergebnisse mit den Originalproben verglichen. Die relative prozentuale Differenz (RPD) wurde als Bewertungsinstrument eingesetzt. Die RPD wird nach der folgenden Gleichung berechnet:

$$RPD = \frac{(C1 - C2)}{(C1 + C2) / 2} * 100\ \%$$

wobei gilt:

RPD = relative prozentuale Differenz,
C1 = höhere beobachtete Konzentration, und
C2 = niedrigere beobachtete Konzentration.

Die RPD ist ein Indikator für die Reproduzierbarkeit des gesamten Verfahrens von der Probenahme bis zur Analyse (einschließlich Probentransport, -lagerung und -vorbereitung). Typischerweise werden RPD-Werte von bis zu 30 % für Grundwasserproben als akzeptabel bewertet. Hohe RPDs können auf Unzulänglichkeiten während eines oder mehrerer dieser Schritte hinweisen, können aber

[redacted]

[redacted]

auch auf die Art der Matrix oder die Art, Verteilung und Konzentration des Zielanalyten zurückzuführen sein.

Die berechneten RPD-Werte für die Grundwassermessstellen sind in **Anhang C** dargestellt. Nahezu alle berechneten RPD-Werte liegen unter 30%, was auf eine gute Korrelation hinweist und eine hohe Reproduzierbarkeit der Daten zeigt. Für die Reinigungsanlage TS3 konnte für den größten Teil der Analyse kein RPD-Wert berechnet werden, da die PFAS-Konzentrationen zumeist unterhalb der Nachweisgrenze lagen.

# 7 Schlussfolgerungen und Empfehlungen

## 7.1 Bewertung der Untersuchungsergebnisse

Die Ergebnisse der Untersuchung des ersten Betriesbsjahres bestätigen die Wirksamkeit der errichteten hydraulischen Abstromsicherung bei CCAN104 sowie die Reinigungsleistung der Reinigungsanlage TS3.

Die Grundwasserstände am Standort CCAN104 weisen nach Beginn der Wasserförderung auf die Ausbildung von Absenktrichtern im Bereich der beiden Grundwasserförderbrunnen GWM 37 und GWM 70 hin. Die Verlagerung des Konzentrationszentrums zur GWM 80A in den Bereich zwischen den beiden Grundwasserförderbrunnen GWM 37 und GWM 70 liefert eine zusätzliche Indikation für den Einfluss des veränderten Fließregimes durch den Pumpbetrieb. Jedoch kann derzeit nicht von einer dauerhaften Entwicklung ausgegangen werden, weil wie erwartet lokale und periodische Schwankungen der Wasserstände zu beobachten sind.

Die gemessenen Wasserstände deuten weiter darauf hin, dass auch Wasser unmittelbar außerhalb der Kaserne von der hydraulischen Sicherung erfasst und das Abströmern von Grundwasser vom Standort verhindert wird.

Die veränderten Fließbedingungen haben keinen unmittelbaren Einfluss auf die PFAS-Konzentrationen außerhalb des Kasernengeländes. Als Grund kann die weiträumige Verbreitung von PFAS im Untergund auch außerhalb der Kaserne angenommen werden.

Die Analysenergebnisse der Reinigungsanlage bestätigen die Wirksamkeit der Reinigung des geförderten Wassers. Die Einleitgrenzwerte wurden in TS3 (abgesehen von einer einmaligen geringfügigen Überschreitung) eingehalten.

## 7.2 Empfehlungen

Ein Jahr nach Implementierung der hydraulischen Abstromsicherung, sowie der Reinigungsanlage TS3 zeigen sowohl die Messstellen am Flugfeld, als auch das Wasser in der Reinigungsanlage PFAS Konzentrationen, die einen Weiterbetrieb der Anlagen erfordern. [redacted] empfiehlt daher den Betrieb der hydraulischen Abstromsicherung mit der Wasserreinigungsanlage entsprechend des bestehenden Konzeptes und der Genehmigungen fortzusetzen.

# 8 Referenzen


[1] AECOM (2016): FY15 PFC Feasibility Study (Hangar 5), Katterbach Kaserne, USAG Ansbach. Februar 2016.

[2] AECOM (2016): FY15 PFC RI/FS at former FFTP near Bldg. 5508 (Hangar 5), Katterbach Kaserne, RI/FS CCAN104. Juli 2016.

[3] Wood (2019): FY17 CCAN104 und CCAN126 – GE43T Sanierungsuntersuchung / Machbarkeitsstudie U.S. Army Garrison Ansbach, Deutschland. Dezember 2019

[4] AECOM (2023): CCAN104 GE43T Groundwater Remedial Design Katterbach Kaserne, USAG Ansbach, Germany. Juni 203.

[5] ERM GmbH (2016): Orientierende Untersuchungen von potenziellen PFC Belastungen im Boden, alter Löschübungsplatzt südlich Gebäude 5850/5809. April 2016.

[6] AECOM (2023): Building 5801 – PFAS IRA Ansbach. Remedial Design of the PFAS Treatment System TS2 Katterbach Barracks, USAG Ansbach, Germany. June 2023.

[7] AECOM (2023): Groundwater Pilot Trial, CCAN104 GE43T Groundwater Remedial Design Katterbach Kaserne, USAG Ansbach, Germany. März 2023.

[8] Stadt Ansbach (2023): Vollzug der Bodenschutzgesetzte; Sanierungsplanung CCAN 104 DGE 43T Errichtung der Abstromsicherung. 21. Juni 2023.

[9] Bayerisches Landesamt für Umwelt - LfU: Erläuterungen zur Geologischen Karte von Bayern 1:25000 Blatt Nr. 6629 Ansbach Nord. 1961.

[10] Bundesregierung: Bundes-Bodenschutz- und Altlastenverordnung (BBodSchV). 09. Juli 2021.

[11] Bayerisches Landesamt für Umwelt - LfU: Merkblatt Nr.3.8/1 - Untersuchung und Bewertung von Altlasten, schädlichen Bodenveränderungen - Wirkungspfad Boden-Grundwasser. Mai 2023.

[12] Bayerisches Landesamt für Umwelt - LfU: Leitlinien zur Bewertung von PFAS. Februar 2025.

[13] Bund/Länder-Arbeitsgemeinschaft Wasser - LAWA: Ableitung von Geringfügigkeitsschwellenwerten für das Grundwasser, Per- und polyfluorierte Chemikalien". Juli 2017.

[14] Bescheid: Vollzug der Wassergesetze; Grundwasser-Abstromsicherung auf dem Kasernengelände Katterbach der U.S. Army Garrison (CCAN104 und CCAN126) durch die [redacted], Rudolphstraße 28, 90489 Nürnberg, 18. Juli 2024

[15] [redacted]- Wasserrechtsantrag für eine Grundwasser-Abstromsicherung CCAN104 und CCAN126 U.S. Army Garrison, Bismarck Kaserne Katterbach, 91522 Ansbach, 23 Mai 2024

[16] Stadt Ansbach, Umweltamt, "Vollzug der Wassergesetzte: Einleiten von Misch- und Niederschlagswasser aus dem nordwestlichen Kasernenbereich der US-Anlage Katterbach, Sanierungsplanung CCAN 104 DGE43T, Errichtung Abstromsicherung" vom 14.11.2018

# Anhang A
# Karten

A.1 Übersicht Katterbach CCAN104

A.2 Detail Katterbach CCAN104

A.3 Detail Katterbach TS3

A.4 Grundwassergleichen

A.4.1 Grundwassergleichen 2024-03

A.4.2 Grundwassergleichen 2024-11

A.4.3 Grundwassergleichen 2025-07







Übersichtskarte / Overview map

## Legende

Standortgrenze / installation boundary

0 100 200 400 Meter

0 295 590 1.180 Fuß/ Feet

**Übersicht Katterbach Kaserne /**
**Overview Katterbach Garrison**

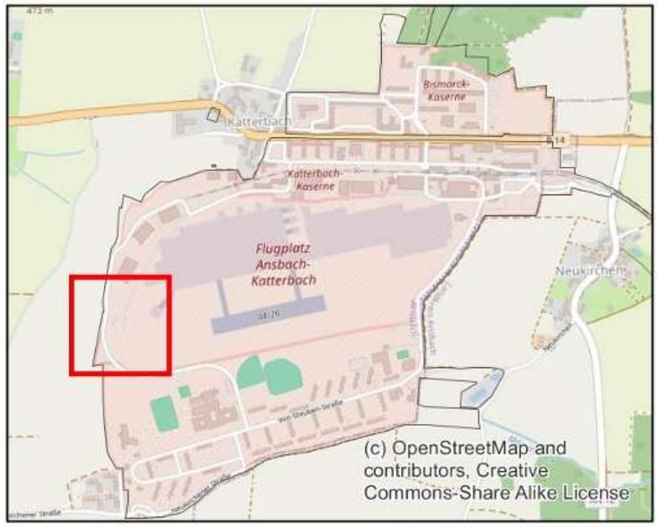
Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

ENV-23-0038 FY23 USAG Ansbach

| | |
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| Erstellt für: Prepared for: [redacted] | Erstellt von: Prepared by: [redacted] |
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| Proj. No.: 581340013G | Datei/ File: A.1_Katterbach_Overview |
| Geprüft/ Checked: | Grafiker/ grafican: |

**Anhang A.1 / Appendix A.1**




Übersichtskarte / Overview map

## Legende

**Grundwassermessstellen / Groundwater Monitoring Wells**

- Grundwasser / Groundwater
- Sickerwasser / Perched Water
- Standortgrenze / installation boundary

0 20 40 80 Meter

0 60 120 240 Fuß/ Feet

**Übersicht Messstellen CCAN104 / Overview Monitoring Wells CCAN104**

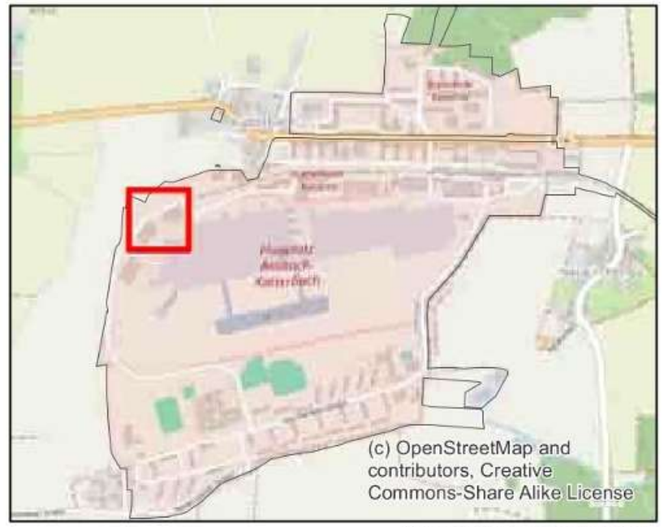
Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

ENV-23-0038 FY23 USAG Ansbach

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| Geprüft/ Checked: [redacted] | Grafiker/ grafican: [redacted] |

**Anhang A.2 / Appendix A.2**

[redacted]




Übersichtskarte / Overview map

**Legende**

Reinigungsanlagen TS2 / TS3

0 12,5 25 50 Meter

0 37,5 75 150 Fuß/ Feet

## Detaillageplan - Site Layout TS2, TS3

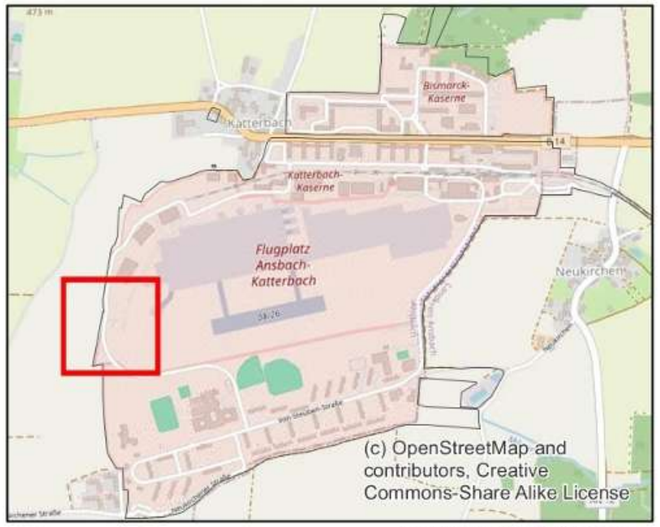
Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

ENV-23-0038 FY23 USAG Ansbach

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| Geprüft/ Checked: [redacted] | Grafiker/ grafican: [redacted] |

**Anhang A.3 / Appendix A.3**




Übersichtskarte / Overview map

## Legende

- Grundwassermessstellen / Groundwater Wells
- Sickerwassermessstellen / Perched Water Wells
- Grundwassergleichen / Groundwater level
- Standortgrenze / installation boundary

0 20 40 80 Meter

0 55 110 220 Fuß/ Feet

**Grundwassergleichen März 2024 / Groundwater Contours March 2024**

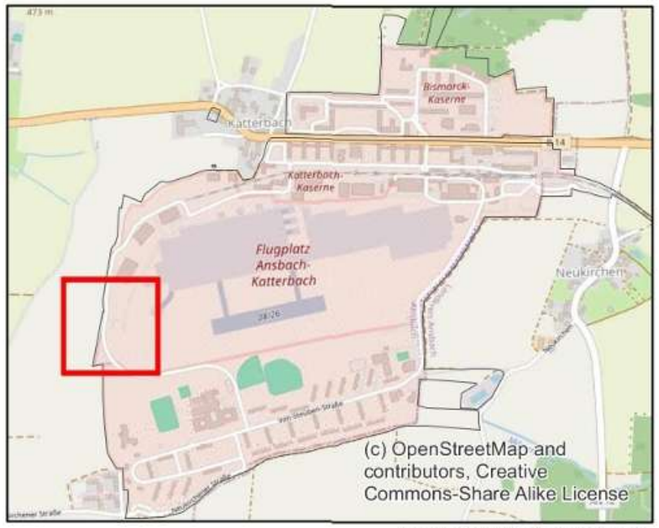
Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

ENV-23-0038 FY23 USAG Ansbach

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| Geprüft/ Checked: [redacted] | Grafiker/ grafican: [redacted] |

**Anhang A.4.1 / Appendix A.4.1**




Übersichtskarte / Overview map

## Legende

- Grundwassermessstellen / Groundwater Wells
- Sickerwassermessstellen / Perched Water Wells
- Grundwassergleichen / Groundwater level
- Standortgrenze / installation boundary

0 20 40 80 Meter

0 55 110 220 Fuß/ Feet

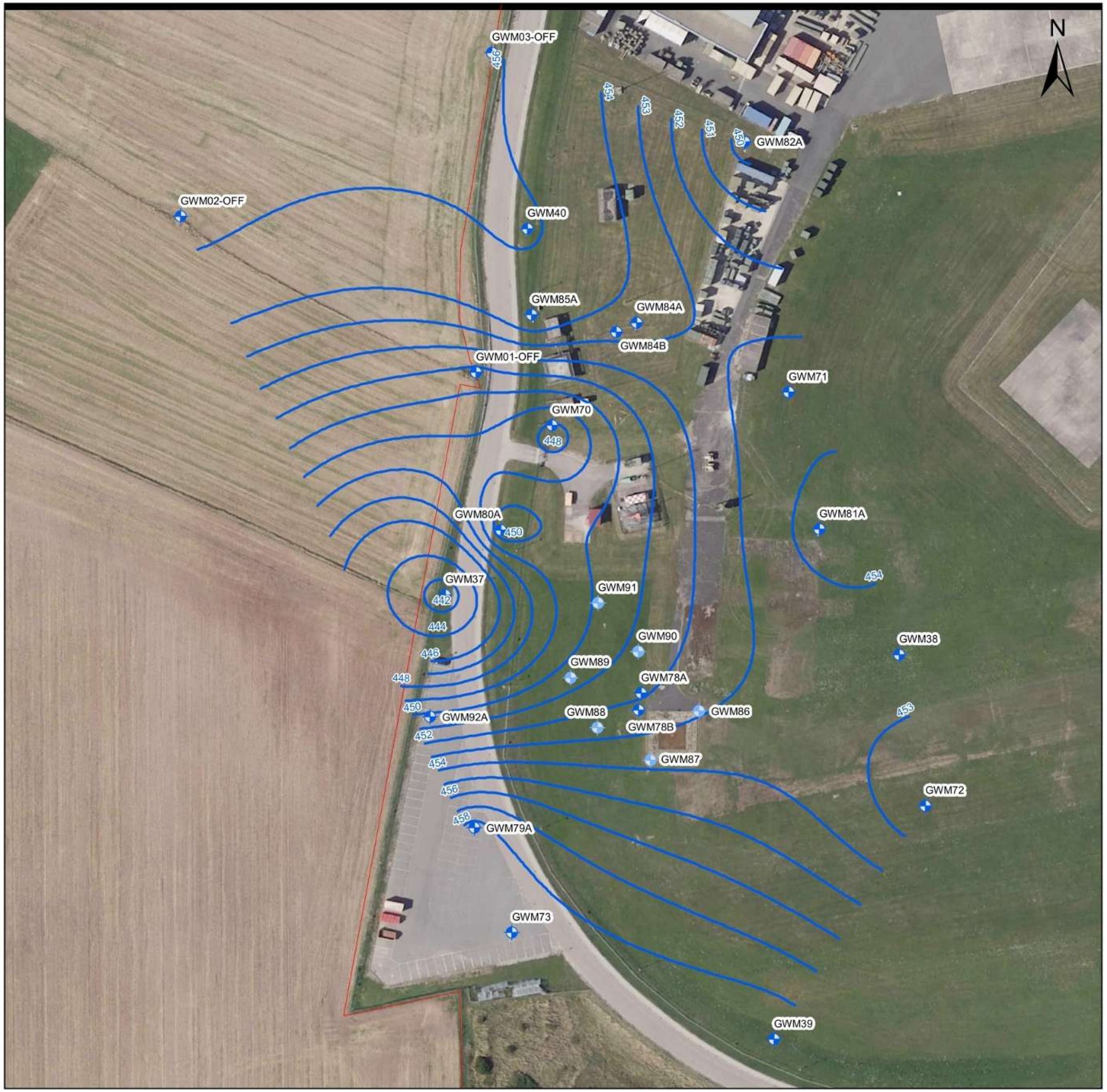
**Grundwassergleichen 04.11.2024 / Groundwater Contours 11-04-2024**

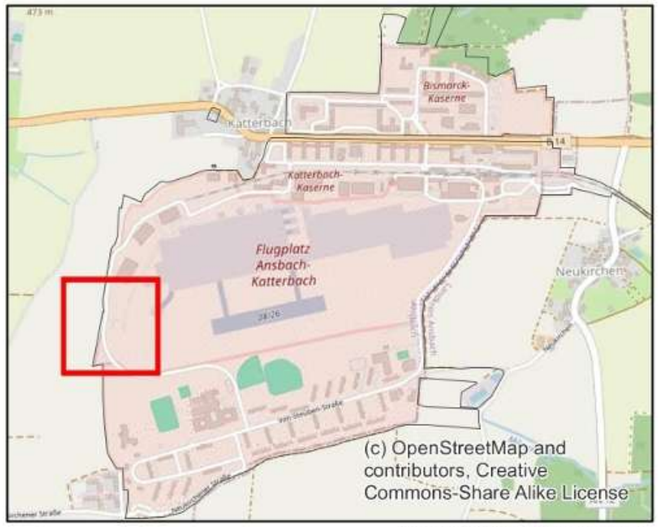
Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

ENV-23-0038 FY23 USAG Ansbach

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| Geprüft/ Checked: | Grafiker/ grafican: [redacted] |

**Anhang A.4.2 / Appendix A.4.2**




Übersichtskarte / Overview map

## Legende

- Grundwassermessstellen / Groundwater Wells
- Sickerwassermessstellen / Perched Water Wells
- Grundwassergleichen / Groundwater level
- Standortgrenze / installation boundary

0 20 40 80 Meter

0 55 110 220 Fuß/ Feet

**Grundwassergleichen 31.07.2025 / Groundwater Contours 07-31-2025**

Katterbach CCAN104 - CCAN126, USAG Ansbach, Deutschland

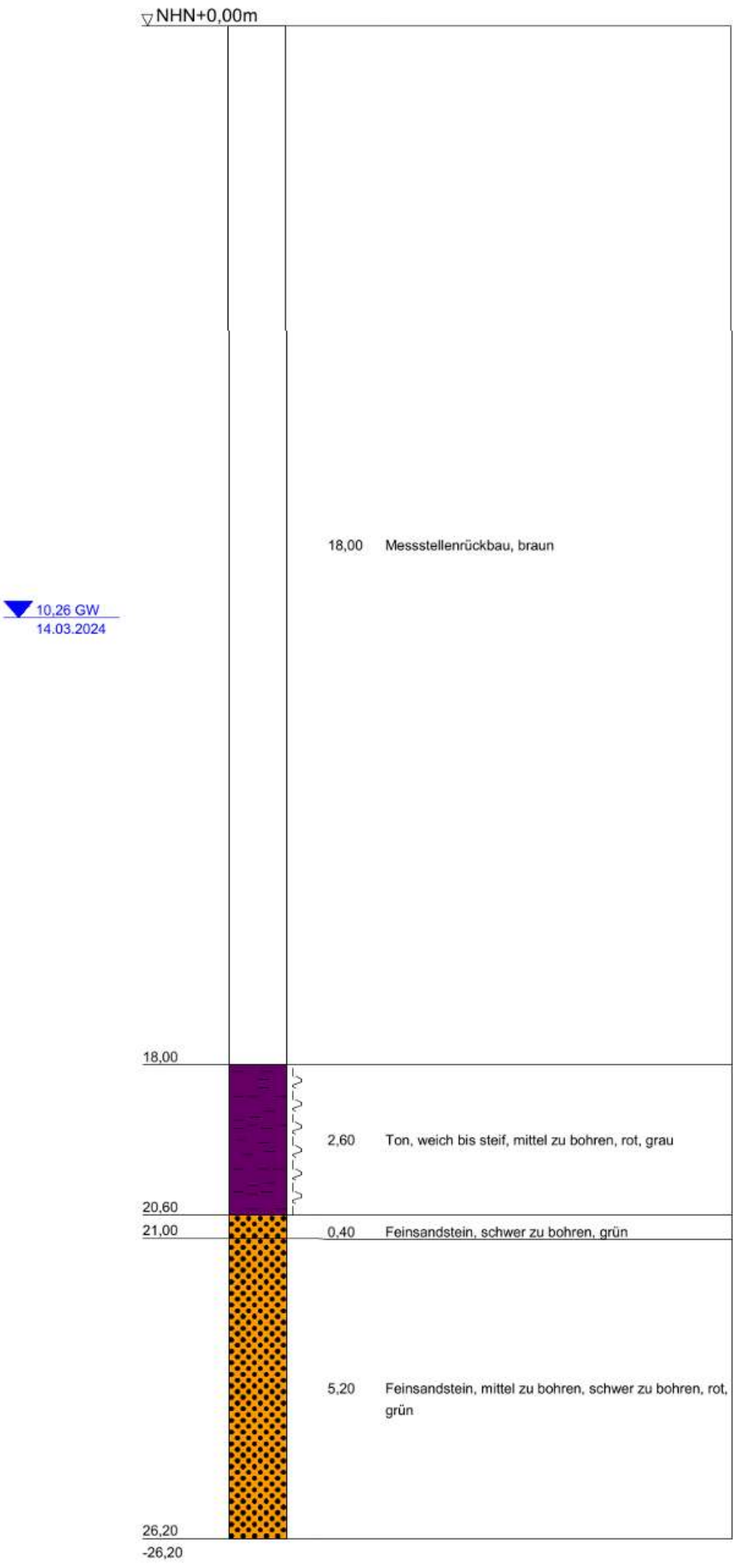
ENV-23-0038 FY23 USAG Ansbach

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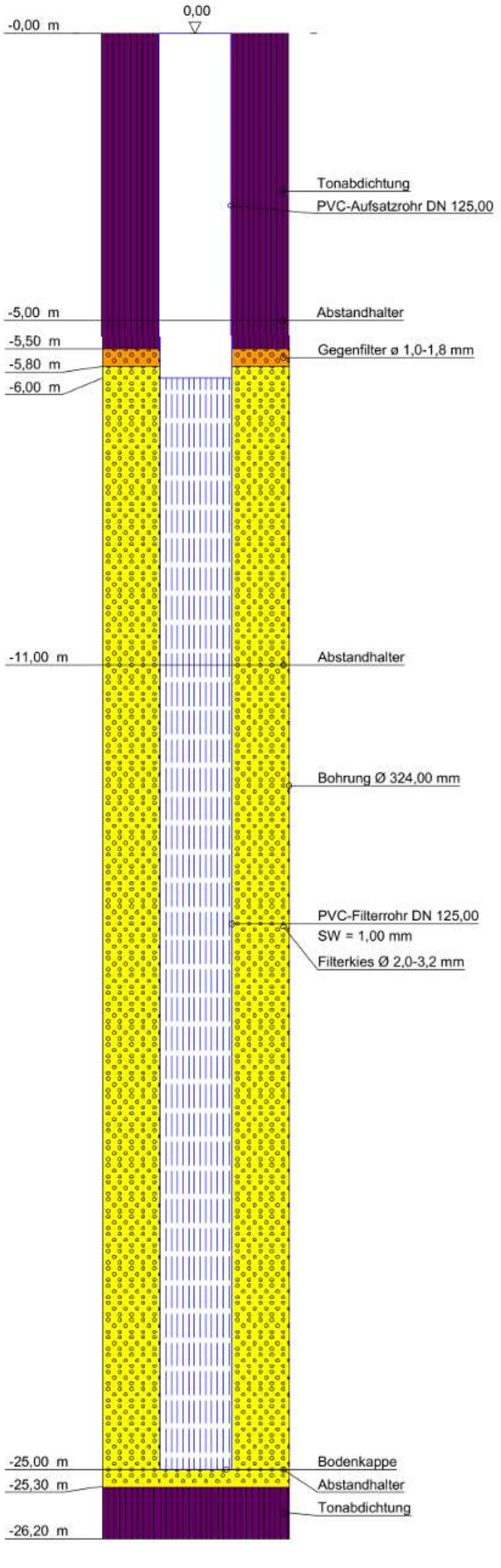
**Anhang A.4.3 / Appendix A.4.3**

# Anhang B Bohr- und Messstellenausbauprofile

## GWM 37




## Messstellenausbau



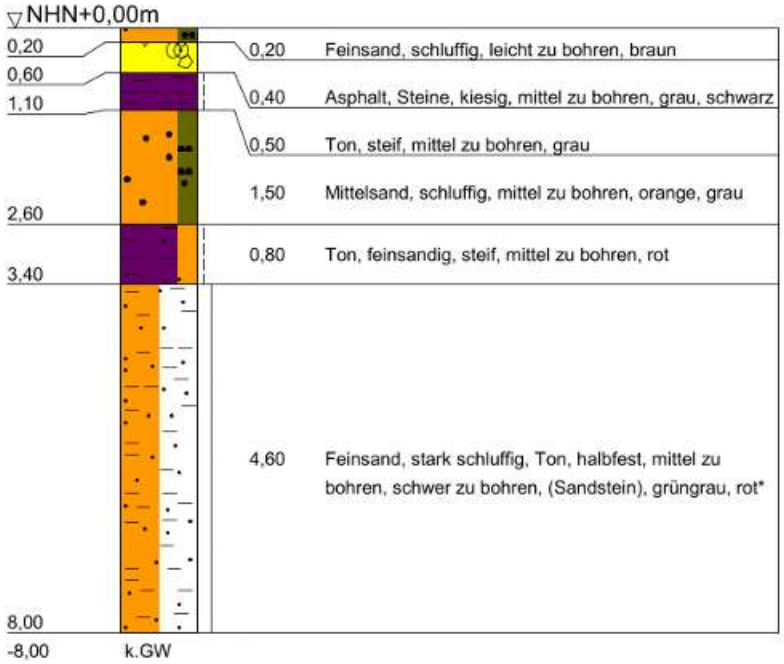

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**Bauvorhaben:**
USAG Ansbach
23-DG-071 Brunnenerstellung

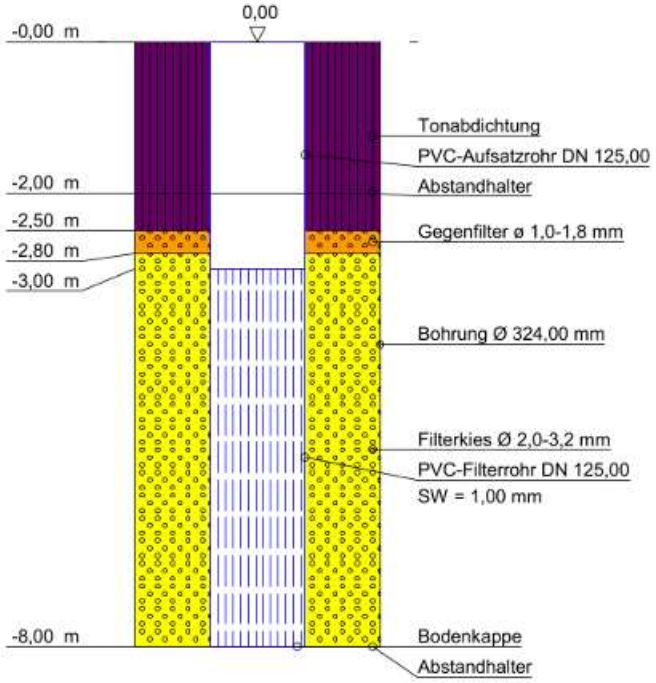
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Bohrprofil und Messstellenausbau

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| Datum: | 05.-11.03.2024 |
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| Bearbeiter: | [redacted] |

## GWM 86




## Messstellenausbau



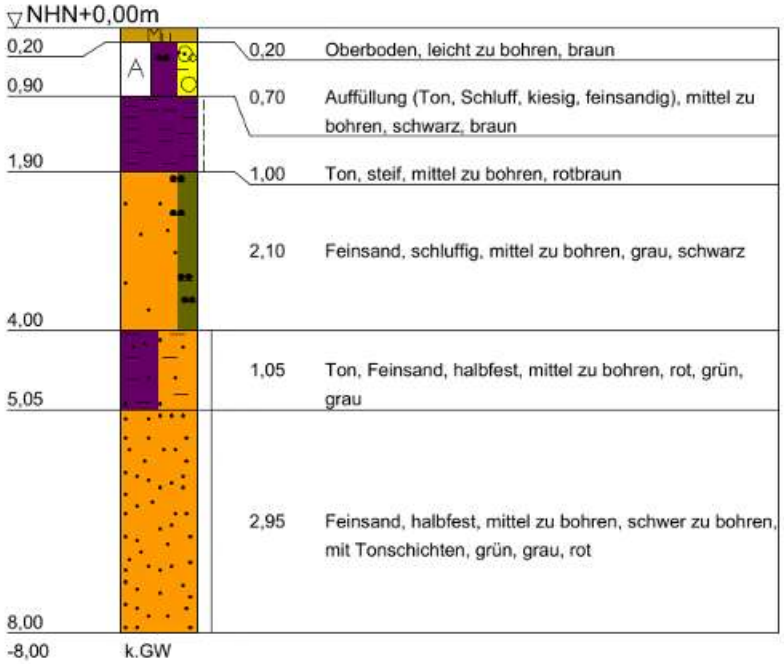

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**Bauvorhaben:**
USAG Ansbach
23-DG-071 Brunnenerstellung

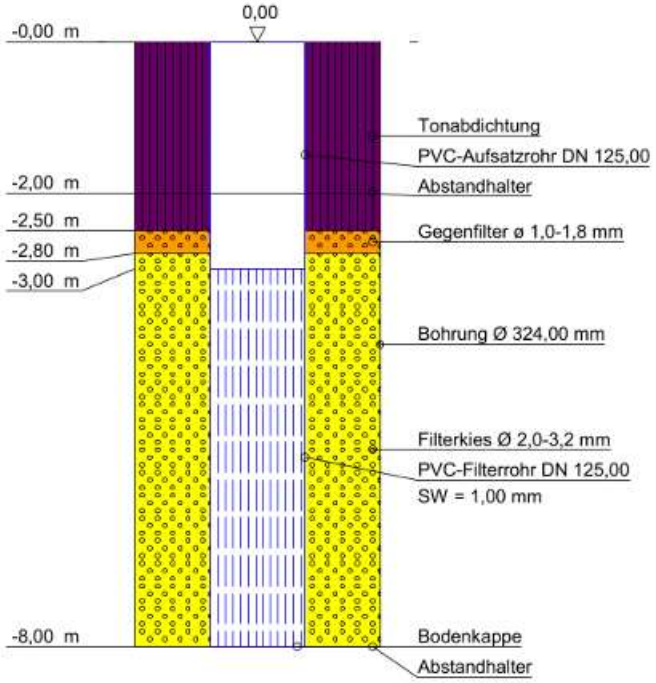
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Bohrprofil und Messstellenausbau

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| Bearbeiter: | [redacted] |

## GWM 87




## Messstellenausbau



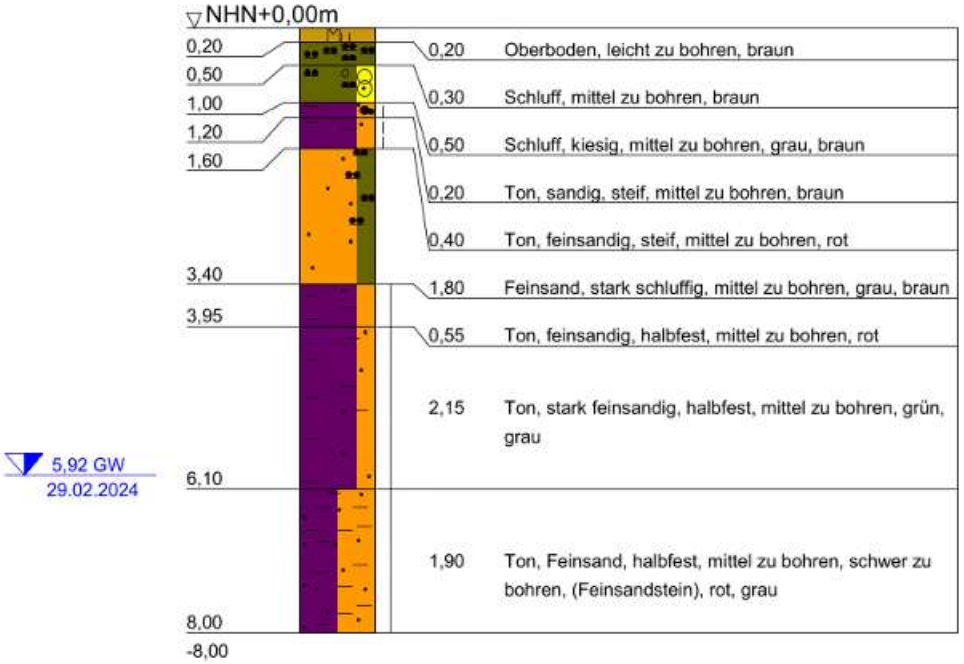

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**Bauvorhaben:**
USAG Ansbach
23-DG-071 Brunnenerstellung

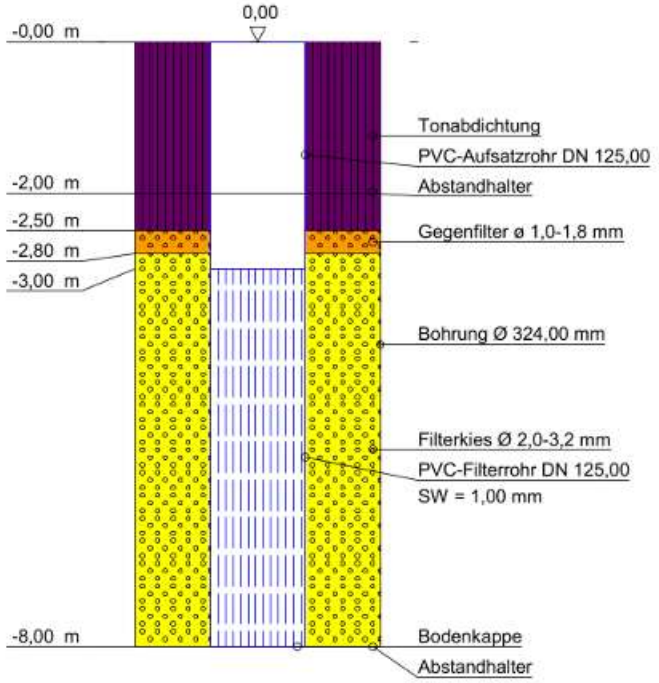
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Bohrprofil und Messstellenausbau

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|---|---|
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# GWM 88




# Messstellenausbau




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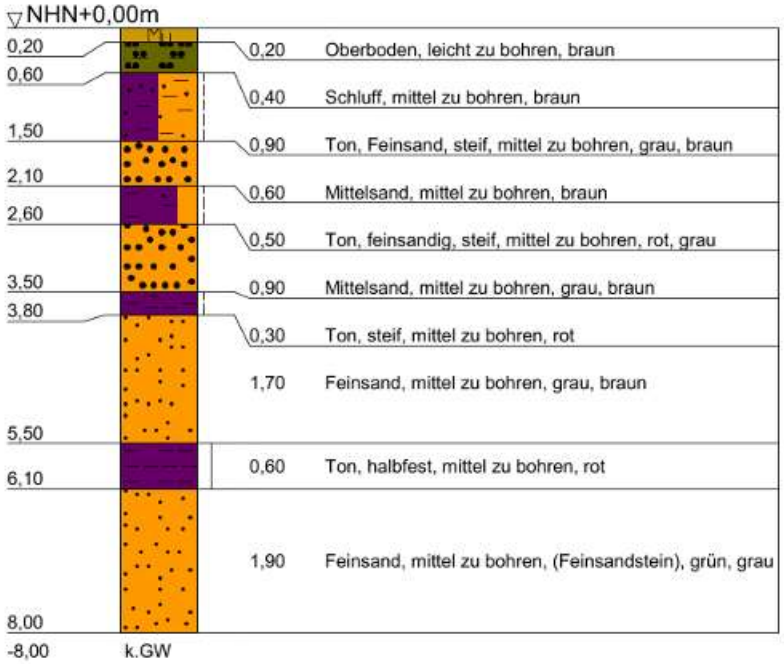
Bauvorhaben:
USAG Ansbach
23-DG-071 Brunnenerstellung

Planbezeichnung:

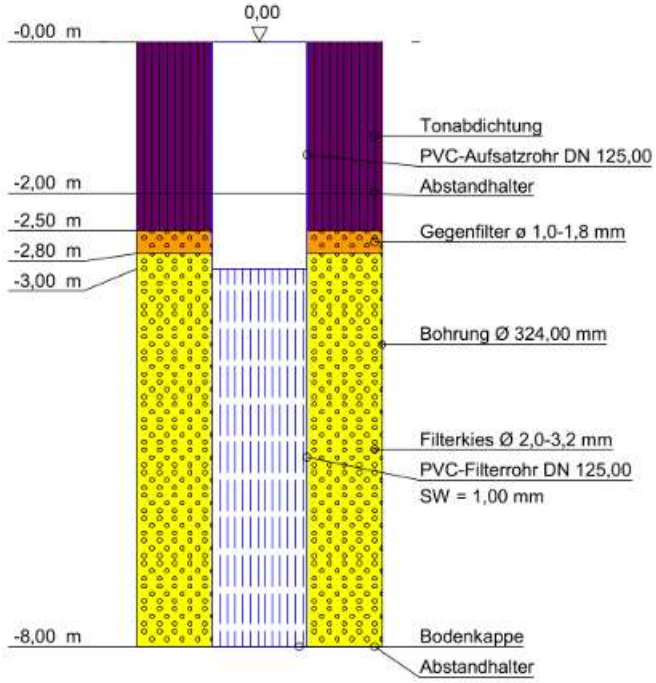
Bohrprofil und Messstellenausbau

| | |
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## GWM 89




## Messstellenausbau



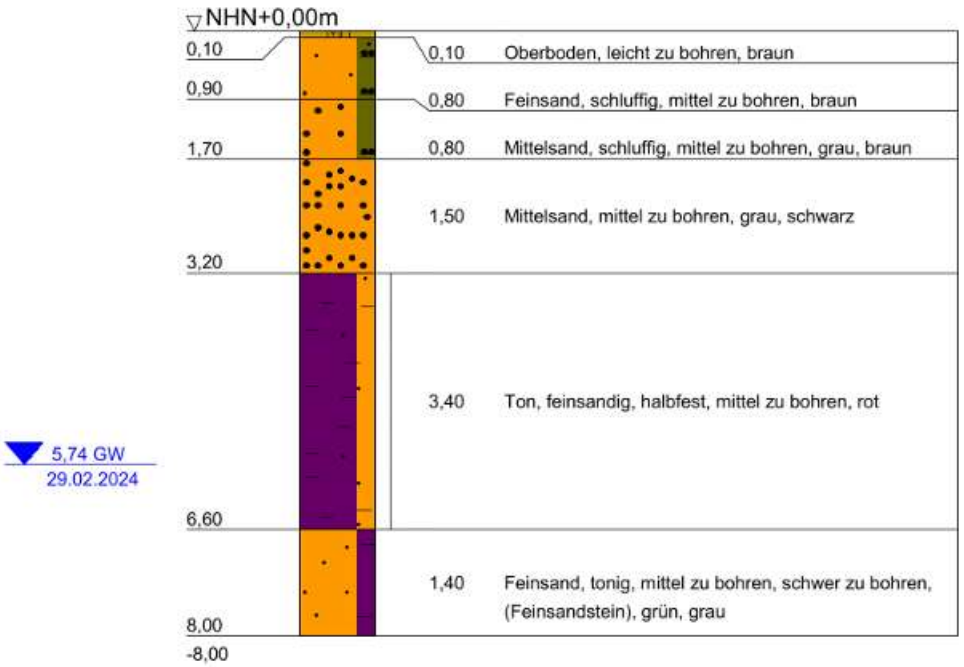

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**Bauvorhaben:**
USAG Ansbach
23-DG-071 Brunnenerstellung

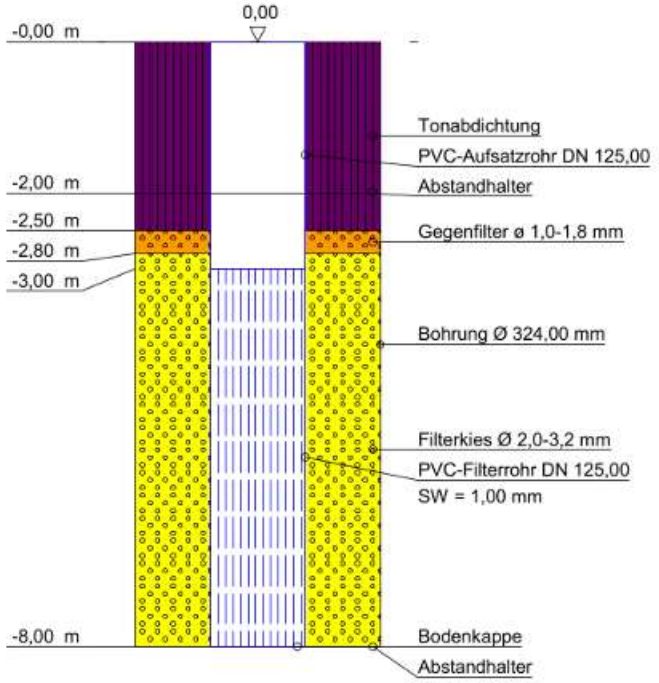
**Planbezeichnung:**
Bohrprofil und Messstellenausbau

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## GWM 90




## Messstellenausbau




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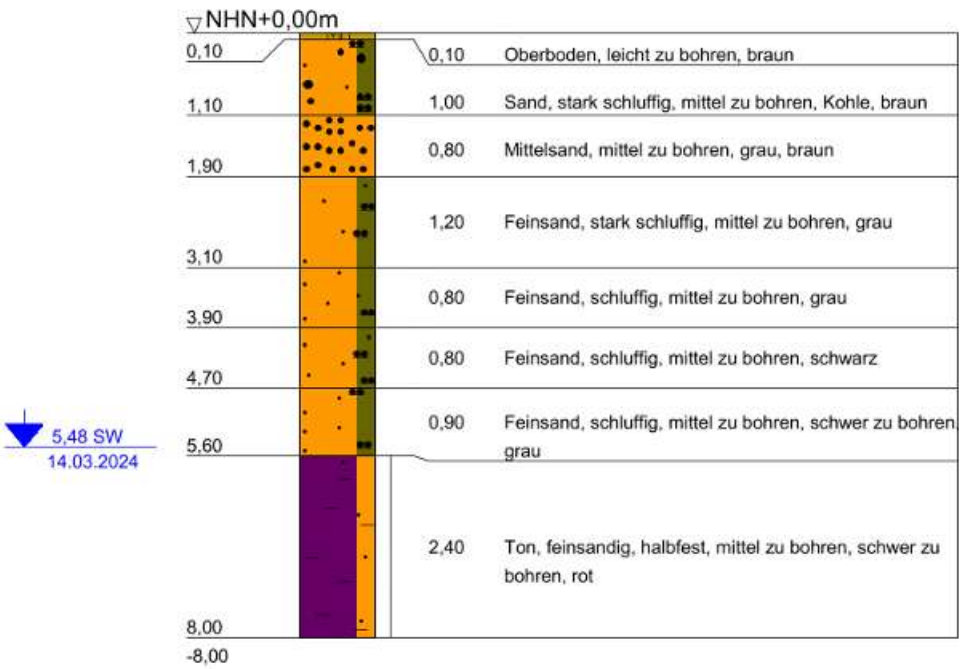
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USAG Ansbach
23-DG-071 Brunnenerstellung

Planbezeichnung:

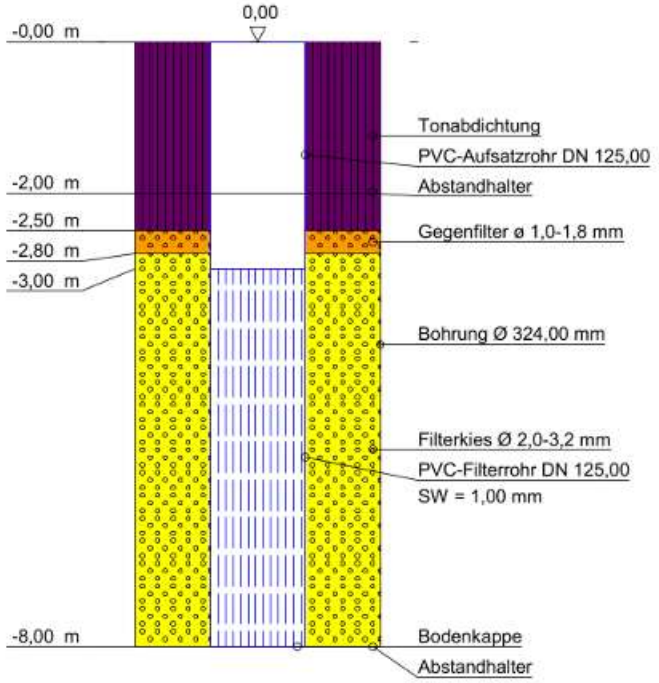
Bohrprofil und Messstellenausbau

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## GWM 91




## Messstellenausbau




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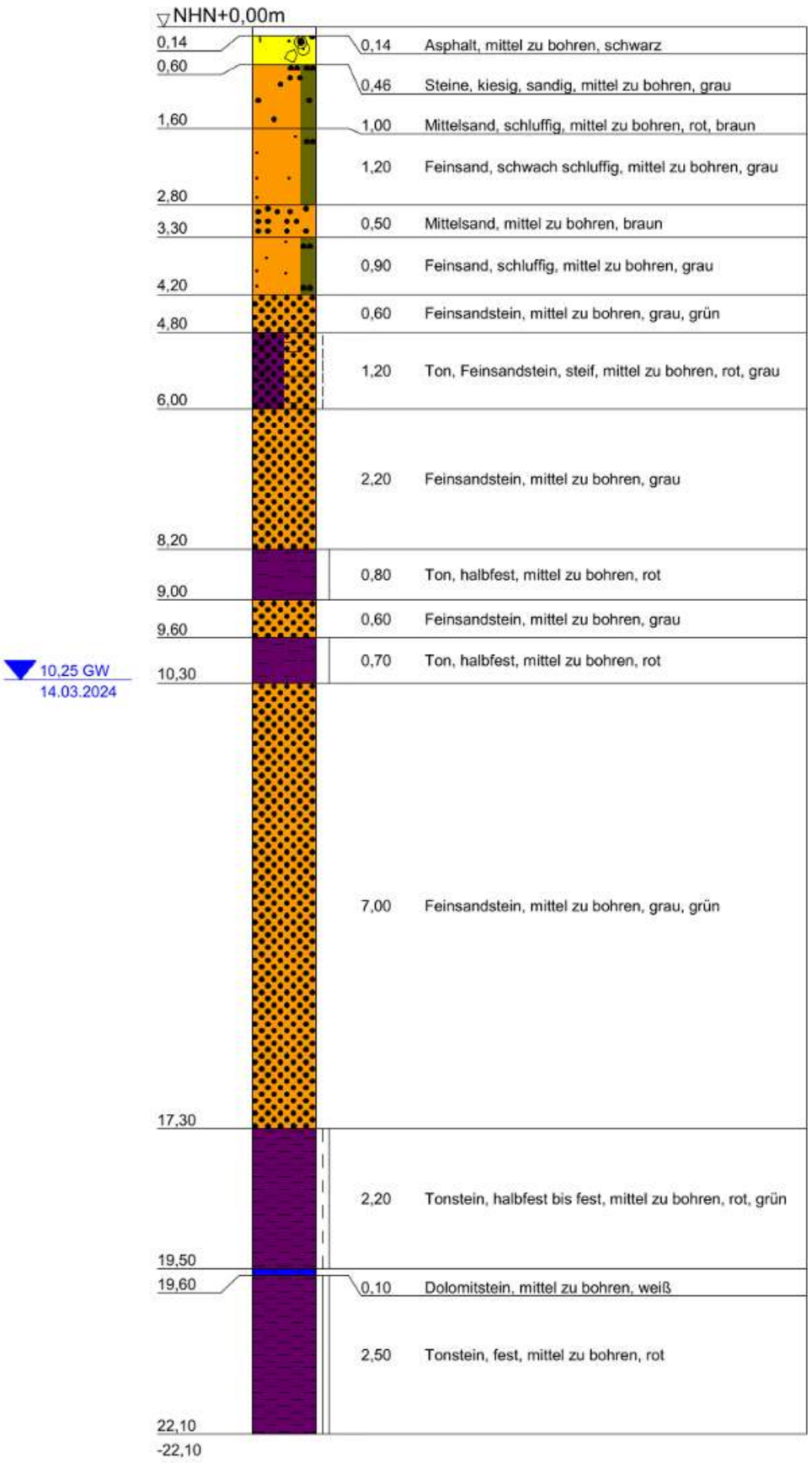
Bauvorhaben:
USAG Ansbach
23-DG-071 Brunnenerstellung

Planbezeichnung:

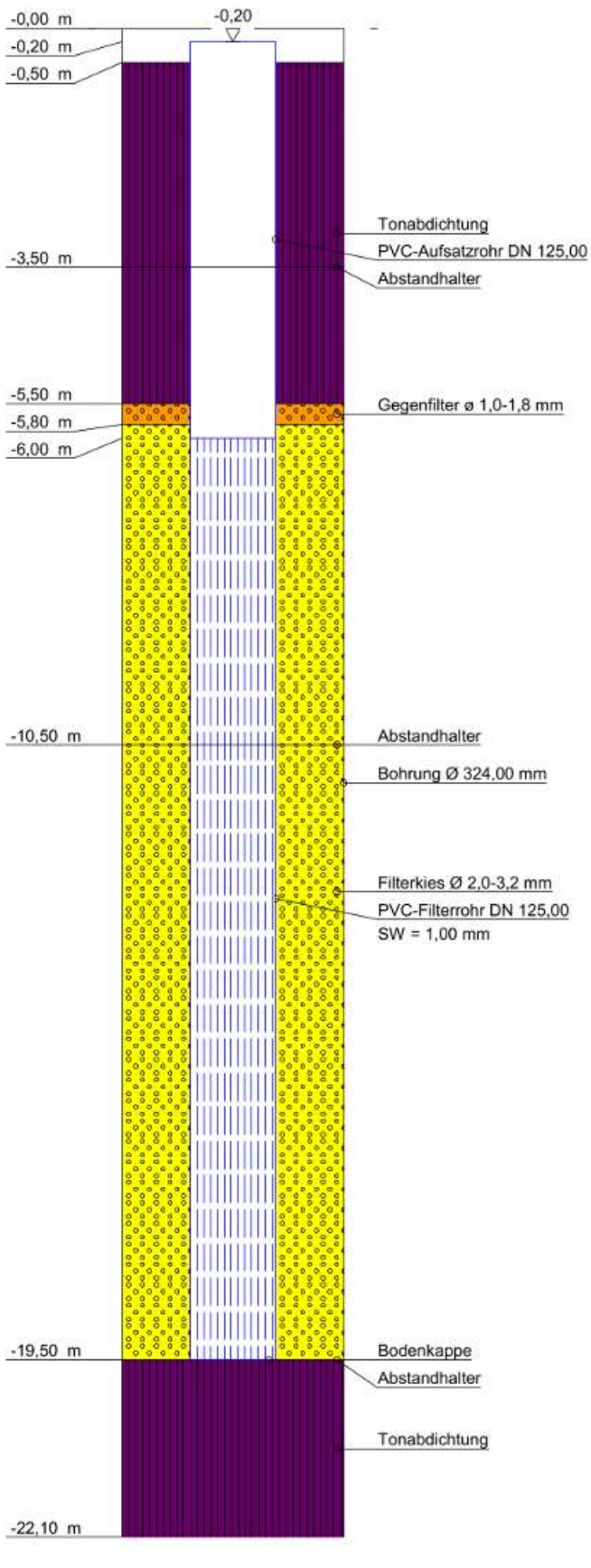
Bohrprofil und Messstellenausbau

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| Bearbeiter: | [redacted] |

## GWM 92 a




## Messstellenausbau




[redacted]

Bauvorhaben:
USAG Ansbach
23-DG-071 Brunnenerstellung

Planbezeichnung:
Bohrprofil und Messstellenausbau

| | |
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| Projekt-Nr: | 2023-0727-1 |
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| Bearbeiter: | [redacted] |

# Anhang C
# Tabellarische Ergebnisse

C.1 Grundwasserhöhen

C.2 Ergebnisse Grundwassermessstellen

C.3 Ergebnisse Reinigungsanlage TS3

C.4 Ergebnisse QA/QC Proben

C.5 Entwicklung Wasserstand und PFAS Konzentration ausgewählter Messstellen

[redacted]

**Tabelle 1: Grundwasserstände / Table 1: Groundwater level**

| GWM | water body | well head March 2024 [m NN] | well head October 2024 * [m NN] | water level March 2024 [m b.w.h.] | water level 2024 KW 42 [m b.w.h.] | water level 2024 KW 43 [m b.w.h.] | water level 2024 KW 44 [m b.w.h.] | water level 2024 KW 45 [m b.w.h.] | water level 2024 KW 47 [m b.w.h.] | water level 2024 KW 49 [m b.w.h.] | water level 2024 KW 51 [m b.w.h.] | water level 2025 KW 03 [m b.w.h.] | water level 2025 KW 07 [m b.w.h.] | water level 2025 KW 11 [m b.w.h.] | water level 2025 KW 15 [m b.w.h.] | water level 2025 KW 19 [m b.w.h.] | water level 2025 KW 23 [m b.w.h.] | water level 2025 KW 27 [m b.w.h.] | water level 2025 KW 31 [m b.w.h.] | water level 2025 KW 35 [m b.w.h.] | water level 2025 KW 39 [m b.w.h.] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWM 37 | groundwater | 463,844 | 463,84 | 9,99 | 21,15 | 22,11 | 23,58 | 23,25 | 20,58 | 23,76 | 20,63 | 17,13 | 24,16 | 23,93 | 23,73 | 23,29 | 23,99 | 24,76 | 23,32 | 23,86 | 24,04 |
| GWM 38 | groundwater | 465,390 | 465,390 | 9,49 | 9,32 | 9,51 | 9,65 | 9,76 | 9,94 | 10,21 | 10,56 | 11,06 | 11,22 | 11,26 | 11,30 | 11,34 | 11,77 | 11,59 | 11,75 | 11,87 | 12,02 |
| GWM 39 | groundwater | 464,550 | 464,550 | 4,34 | 5,37 | 5,31 | 5,39 | 5,38 | 5,43 | 5,48 | 5,50 | 5,26 | 5,08 | 4,73 | 5,00 | 5,18 | 5,32 | 5,45 | 5,58 | 5,70 | 5,76 |
| GWM 40 | groundwater | 464,320 | 464,320 | 7,32 | 7,82 | 7,88 | 7,87 | 7,91 | 7,93 | 8,21 | 8,16 | 8,04 | 7,97 | 8,82 | 7,80 | 7,82 | 7,89 | 7,95 | 8,03 | 8,11 | 8,14 |
| GWM 70 | groundwater | 464,770 | 465 | 9,19 | 14,43 | 15,32 | 15,70 | 15,85 | 15,88 | 16,24 | 16,56 | 17,01 | 16,74 | 16,45 | 16,63 | 16,34 | 16,86 | 17,08 | 17,4 | 17,54 | 17,54 |
| GWM 71 | groundwater | 465,600 | 465,600 | 9,08 | 10,05 | 10,33 | 13,58 | 10,66 | 11,33 | 11,50 | 11,65 | 11,88 | 11,68 | 11,37 | 11,43 | 11,51 | 11,6 | 11,71 | 11,78 | 11,96 | 12,07 |
| GWM 72 | groundwater | 464,640 | 464,640 | 7,29 | 9,77 | 10,34 | 10,76 | 11,01 | 11,13 | 11,33 | 11,65 | 12,04 | 11,99 | 11,78 | 11,89 | 11,92 | 12,05 | 12,25 | 12,52 | 12,58 | 12,88 |
| GWM 73 | groundwater | 464,250 | 464,250 | n.a. | n.a. | n.a. | n.a. | 5,56 | 5,59 | 5,65 | 5,67 | 5,50 | 5,28 | 4,99 | 5,16 | 5,31 | 5,46 | 5,59 | 5,73 | 5,85 | 5,96 |
| GWM 78A | groundwater | 464,340 | 464,62 | 8,79 | 12,75 | 12,65 | 12,45 | 12,45 | 12,37 | 12,50 | 12,40 | 12,52 | n.a. | 12,43 | 12,52 | 12,4 | 12,4 | 12,44 | 12,49 | 12,51 | 12,46 |
| GWM 78B | groundwater | 464,420 | 464,420 | 8,79 | 10,69 | 11,62 | 12,16 | 12,43 | 12,44 | 12,84 | 12,84 | 13,18 | 13,08 | 12,91 | 13,06 | 13,1 | 13,21 | 13,31 | 13,48 | 13,53 | 13,68 |
| GWM 79A | groundwater | 464,150 | 464,150 | n.a. | n.a. | n.a. | n.a. | 5,58 | 5,60 | 5,67 | 5,71 | 5,68 | 5,50 | 5,26 | 5,27 | 5,38 | 5,49 | 5,60 | 5,71 | 5,80 | 5,91 |
| GWM 80A | groundwater | 464,290 | 464,290 | 9,26 | 10,32 | 11,75 | 11,78 | 12,07 | 12,42 | 12,67 | 12,89 | 13,07 | 13,14 | 13,10 | 13,11 | 13,16 | 13,21 | 13,30 | 13,42 | 13,58 | 13,66 |
| GWM 81A | groundwater | 465,270 | 465,270 | 8,40 | 9,22 | 9,44 | 9,65 | 9,76 | 10,08 | 10,27 | 10,53 | 10,60 | 10,46 | 10,20 | 10,26 | 10,39 | 10,54 | 10,65 | 10,82 | 10,95 | 11,15 |
| GWM 82A | groundwater | 464,550 | 464,550 | 10,89 | 12,91 | 12,94 | 13,58 | 13,78 | 13,99 | 14,21 | 13,80 | 14,75 | 14,57 | 14,22 | 14,35 | 14,43 | 14,61 | 14,85 | 15,05 | 15,23 | 15,38 |
| GWM 84A | groundwater | 465,170 | 465,170 | 8,87 | 8,98 | 10,46 | 10,69 | 10,83 | 11,06 | 11,23 | 11,46 | 11,64 | 11,44 | 11,22 | 11,27 | 11,34 | 11,43 | 11,52 | 11,65 | 11,76 | 11,90 |
| GWM 84B | groundwater | 465,170 | 465,170 | 12,43 | 14,03 | 14,72 | 14,01 | 15,07 | 15,13 | 15,59 | 15,59 | 15,88 | 14,74 | 15,42 | 15,55 | 15,65 | 15,81 | 16,00 | 16,11 | 16,35 | 16,46 |
| GWM 85A | groundwater | 464,640 | 464,640 | 7,89 | 8,80 | 9,65 | 8,75 | 8,87 | 9,14 | 9,33 | 9,47 | 9,57 | 9,44 | 9,12 | 9,04 | 9,06 | 9,22 | 9,37 | 9,57 | 9,71 | 9,87 |
| GWM 86 | perched water | 464,669 | 464,67 | n.m. | 7,23 | 7,26 | 7,43 | 7,71 | 4,89 | n.m. | 7,32 | 6,85 | n.m. | 7,24 | n.m. | n.m. | n.m. | n.m. | 7,62 | n.m. | 6,97 |
| GWM 87 | perched water | 464,546 | 464,55 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | 7,16 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. |
| GWM 88 | perched water | 464,294 | 464,29 | 5,97 | 6,73 | 7,11 | 6,89 | 7,01 | 7,18 | 7,00 | 7,15 | 7,14 | 7,15 | 7,28 | 7,20 | 7,3 | 7,15 | 7,71 | 7,16 | 7,14 | 7,30 |
| GWM 89 | perched water | 464,387 | 464,39 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | 7,95 | 7,95 | n.m. |
| GWM 90 | perched water | 464,576 | 464,58 | 6,05 | 7,85 | n.m. | 7,73 | 7,90 | 7,82 | n.m. | 7,87 | 7,39 | 7,41 | 7,40 | 7,33 | 7,71 | 7,85 | 7,97 | n.m. | n.m. | n.m. |
| GWM 91 | perched water | 464,665 | 464,67 | 5,54 | 6,63 | 4,77 | n.m. | 5,35 | 5,61 | 5,19 | 6,81 | 3,74 | 5,23 | 5,43 | 5,39 | 5,57 | 5,79 | 5,15 | 5,01 | 5,11 | 5,23 |
| GWM 92A | groundwater | 463,860 | 463,860 | 10,01 | 12,51 | 12,97 | 13,05 | 13,37 | 13,40 | 13,61 | 13,74 | 13,95 | 13,90 | 13,78 | 13,91 | 14,01 | 14,22 | 14,37 | 14,53 | 14,68 | 14,90 |
| Offpost 01 | groundwater | 465,240 | 465,240 | n.a. | 9,97 | 10,44 | 10,76 | 10,87 | 10,84 | 11,62 | 11,82 | 12,10 | 11,31 | 11,01 | 9,80 | 13,89 | 14,15 | 14,23 | 14,37 | 14,42 | 14,72 |
| Offpost 02 | groundwater | 463,610 | 463,610 | n.a. | 6,60 | 6,63 | 6,68 | 6,69 | 6,73 | 6,82 | 6,91 | 6,79 | 6,58 | 6,82 | 6,33 | 6,49 | 6,57 | 6,68 | 6,78 | 6,91 | 7,61 |
| Offpost 03 | groundwater | 463,860 | 463,860 | n.a. | 7,52 | 7,58 | n.a. | 7,66 | 7,65 | 7,47 | 7,77 | 7,74 | 7,61 | 7,95 | 7,53 | 7,38 | 7,58 | 7,65 | 7,66 | 8,46 | 9,16 |

| GWM | water body | well head March 2024 [m NN] | well head October 2024 * [m NN] | water level March 2024 [m NN] | water level 2024 KW 42 [m NN] | water level 2024 KW 43 [m NN] | water level 2024 KW 44 [m NN] | water level 2024 KW 45 [m NN] | water level 2024 KW 47 [m NN] | water level 2024 KW 49 [m NN] | water level 2024 KW 51 [m NN] | water level 2025 KW 03 [m NN] | water level 2025 KW 07 [m NN] | water level 2025 KW 11 [m NN] | water level 2025 KW 15 [m NN] | water level 2025 KW 19 [m NN] | water level 2025 KW 23 [m NN] | water level 2025 KW 27 [m NN] | water level 2025 KW 31 [m NN] | water level 2025 KW 35 [m NN] | water level 2025 KW 39 [m NN] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWM 37 | groundwater | 463,844 | 463,84 | 453,854 | 442,690 | 441,730 | 440,260 | 440,590 | 443,260 | 440,080 | 443,210 | 446,710 | 439,680 | 439,910 | 440,110 | 440,550 | 439,850 | 439,080 | 440,520 | 439,980 | 439,800 |
| GWM 38 | groundwater | 465,390 | 465,390 | 455,905 | 456,070 | 455,880 | 455,740 | 455,630 | 455,450 | 455,180 | 454,830 | 454,330 | 454,170 | 454,130 | 454,090 | 454,050 | 453,620 | 453,800 | 453,640 | 453,520 | 453,370 |
| GWM 39 | groundwater | 464,550 | 464,550 | 460,210 | 459,180 | 459,240 | 459,160 | 459,170 | 459,120 | 459,070 | 459,050 | 459,290 | 459,470 | 459,820 | 459,550 | 459,370 | 459,230 | 459,100 | 458,970 | 458,850 | 458,790 |
| GWM 40 | groundwater | 464,320 | 464,320 | 457,000 | 456,500 | 456,440 | 456,450 | 456,410 | 456,390 | 456,110 | 456,160 | 456,280 | 456,350 | 455,500 | 456,520 | 456,500 | 456,430 | 456,370 | 456,290 | 456,210 | 456,180 |
| GWM 70 | groundwater | 464,770 | 465 | 455,580 | 450,570 | 449,680 | 449,300 | 449,150 | 449,120 | 448,760 | 448,440 | 447,990 | 448,260 | 448,550 | 448,370 | 448,660 | 448,140 | 447,920 | 447,600 | 447,460 | 447,460 |
| GWM 71 | groundwater | 465,600 | 465,600 | 456,520 | 455,550 | 455,270 | 452,020 | 454,940 | 454,270 | 454,100 | 453,950 | 453,720 | 453,920 | 454,230 | 454,170 | 454,090 | 454,000 | 453,890 | 453,820 | 453,640 | 453,530 |
| GWM 72 | groundwater | 464,640 | 464,640 | 457,350 | 454,870 | 454,300 | 453,880 | 453,630 | 453,510 | 453,310 | 452,990 | 452,600 | 452,650 | 452,860 | 452,750 | 452,720 | 452,590 | 452,390 | 452,120 | 452,060 | 451,760 |
| GWM 73 | groundwater | 464,250 | 464,250 | n.a. | n.a. | n.a. | n.a. | 458,690 | 458,660 | 458,600 | 458,580 | 458,750 | 458,970 | 459,260 | 459,090 | 458,940 | 458,790 | 458,660 | 458,520 | 458,400 | 458,290 |
| GWM 78A | groundwater | 464,340 | 464,62 | 455,550 | 451,870 | 451,970 | 452,170 | 452,170 | 452,250 | 452,120 | 452,220 | 452,100 | n.a. | 452,190 | 452,100 | 452,220 | 452,220 | 452,180 | 452,130 | 452,110 | 452,160 |
| GWM 78B | groundwater | 464,420 | 464,420 | 455,630 | 453,730 | 452,800 | 452,260 | 451,990 | 451,980 | 451,580 | 451,580 | 451,240 | 451,340 | 451,510 | 451,360 | 451,320 | 451,210 | 451,110 | 450,940 | 450,890 | 450,740 |
| GWM 79A | groundwater | 464,150 | 464,150 | n.a. | n.a. | n.a. | n.a. | 458,570 | 458,550 | 458,480 | 458,440 | 458,470 | 458,650 | 458,890 | 458,880 | 458,770 | 458,660 | 458,550 | 458,440 | 458,350 | 458,240 |
| GWM 80A | groundwater | 464,290 | 464,290 | 455,030 | 453,970 | 452,540 | 452,510 | 452,220 | 451,870 | 451,620 | 451,400 | 451,220 | 451,150 | 451,190 | 451,180 | 451,130 | 451,080 | 450,990 | 450,870 | 450,710 | 450,630 |
| GWM 81A | groundwater | 465,270 | 465,270 | 456,870 | 456,050 | 455,830 | 455,620 | 455,510 | 455,190 | 455,000 | 454,740 | 454,670 | 454,810 | 455,070 | 455,010 | 454,880 | 454,730 | 454,620 | 454,450 | 454,320 | 454,120 |
| GWM 82A | groundwater | 464,550 | 464,550 | 453,660 | 451,640 | 451,610 | 450,970 | 450,770 | 450,560 | 450,340 | 450,750 | 449,800 | 449,980 | 450,330 | 450,200 | 450,120 | 449,940 | 449,700 | 449,500 | 449,320 | 449,170 |
| GWM 84A | groundwater | 465,170 | 465,170 | 456,300 | 456,190 | 454,710 | 454,480 | 454,340 | 454,110 | 453,940 | 453,710 | 453,530 | 453,730 | 453,950 | 453,900 | 453,830 | 453,740 | 453,650 | 453,520 | 453,410 | 453,270 |
| GWM 84B | groundwater | 465,170 | 465,170 | 452,740 | 451,140 | 450,450 | 451,160 | 450,100 | 450,040 | 449,580 | 449,580 | 449,290 | 450,430 | 449,750 | 449,620 | 449,520 | 449,360 | 449,170 | 449,060 | 448,820 | 448,710 |
| GWM 85A | groundwater | 464,640 | 464,640 | 456,750 | 455,840 | 454,990 | 455,890 | 455,770 | 455,500 | 455,310 | 455,170 | 455,070 | 455,200 | 455,520 | 455,600 | 455,580 | 455,420 | 455,270 | 455,070 | 454,930 | 454,770 |
| GWM 86 | perched water | 464,669 | 464,67 | n.m. | 457,440 | 457,410 | 457,240 | 456,960 | 459,780 | #VALUE! | 457,350 | 457,820 | n.m. | 457,430 | n.m. | n.m. | n.m. | n.m. | 457,050 | n.m. | 457,700 |
| GWM 87 | perched water | 464,546 | 464,55 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | 455,700 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. |
| GWM 88 | perched water | 464,294 | 464,29 | 458,324 | 457,560 | 457,180 | 457,400 | 457,280 | 457,110 | 457,290 | 457,140 | 457,150 | 457,140 | 457,010 | 457,090 | 456,990 | 457,140 | 456,580 | 457,130 | 457,150 | 456,990 |
| GWM 89 | perched water | 464,387 | 464,39 | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | 456,440 | 456,440 | n.m. |
| GWM 90 | perched water | 464,576 | 464,58 | 458,526 | 456,730 | n.m. | 456,850 | 456,680 | 456,760 | #VALUE! | 456,710 | 457,190 | 457,170 | 457,180 | 457,250 | 456,870 | 456,730 | 456,610 | n.m. | n.m. | n.m. |
| GWM 91 | perched water | 464,665 | 464,67 | 459,125 | 458,040 | 459,900 | n.m. | 459,320 | 459,060 | 459,480 | 457,860 | 460,930 | 459,440 | 459,240 | 459,280 | 459,100 | 458,880 | 459,520 | 459,660 | 459,560 | 459,440 |
| GWM 92A | groundwater | 463,860 | 463,860 | 453,850 | 451,350 | 450,890 | 450,810 | 450,490 | 450,460 | 450,250 | 450,120 | 449,910 | 449,960 | 450,080 | 449,950 | 449,850 | 449,640 | 449,490 | 449,330 | 449,180 | 448,960 |
| Offpost 01 | groundwater | 465,240 | 465,240 | n.a. | 455,270 | 454,800 | 454,480 | 454,370 | 454,400 | 453,620 | 453,420 | 453,140 | 453,930 | 454,230 | 455,440 | 451,350 | 451,090 | 451,010 | 450,870 | 450,820 | 450,520 |
| Offpost 02 | groundwater | 463,610 | 463,610 | n.a. | 457,010 | 456,980 | 456,930 | 456,920 | 456,880 | 456,790 | 456,700 | 456,820 | 457,030 | 456,790 | 457,280 | 457,120 | 457,040 | 456,930 | 456,830 | 456,700 | 456,000 |
| Offpost 03 | groundwater | 463,860 | 463,860 | n.a. | 456,340 | 456,280 | n.a. | 456,200 | 456,210 | 456,390 | 456,090 | 456,120 | 456,250 | 455,910 | 456,330 | 456,480 | 456,280 | 456,210 | 456,200 | 455,400 | 454,700 |

* Schachtoberkante für: / top of shaft for: GWM 37, 70, 78A, 86, 87, 88, 89, 90, 91

n.a.: nicht zugänglich / not accessible

n.m.: nicht messbar, kein Sickerwasser / not measurable, no perched water

Messung durch CDM Smith / measurement done by CDM Smith

[redacted]

**Tabelle 1: PFAS Ergebnisse Grundwassermessstellen / Table 1: PFAS results groundwater monitoring wells**

| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 37 | Grundwasser | 27.03.2024 | 10 | 36 | 5 | 0,77 | 2,3 | 5 | 1,1 | 2,1 | 1,2 | <0,01 | 2,5 | 1,6 | <0,01 | 67,57 |
| | | 16.10.2024 | 8,9 | 27 | 4,1 | 0,74 | 2,2 | 4,3 | 0,93 | 2,1 | 1 | <0,01 | 1,9 | 1,4 | <0,01 | 55 |
| | | 28.10.2024 | 13,4 | 26 | 6,4 | 0,78 | 2,4 | 4 | 0,82 | 1,84 | 0,68 | <0,01 | 1,62 | 1,16 | <0,01 | 60 |
| | | 04.11.2024 | 13 | 9,9 | 3,2 | 0,34 | 0,97 | 1,7 | 0,37 | 0,61 | 0,45 | <0,01 | 0,61 | 0,59 | <0,01 | 32 |
| | | 03.12.2024 | 6,9 | 8,8 | 3,5 | 0,29 | 0,88 | 1,5 | 0,35 | 0,79 | 0,3 | <0,01 | 0,47 | 0,5 | <0,01 | 24 |
| | | 13.01.2025 | 6,2 | 5,8 | 1,8 | 0,25 | 0,77 | 1,3 | 0,34 | 0,6 | 0,22 | <0,01 | 0,38 | 0,36 | <0,01 | 18 |
| | | 12.02.2025 | 6,2 | 6,3 | 2,4 | 0,25 | 0,72 | 1,1 | 0,26 | 0,4 | 0,22 | <0,01 | 0,37 | 0,25 | <0,01 | 18 |
| | | 10.03.2025 | 3,3 | 6,7 | 2,4 | 0,28 | 0,81 | 1,3 | 0,34 | 0,56 | 0,14 | <0,01 | 0,41 | 0,29 | <0,01 | 17 |
| | | 10.04.2025 | 7 | 6,3 | 2,4 | 0,27 | 0,88 | 1,4 | 0,36 | 0,59 | 0,26 | <0,01 | 0,43 | 0,28 | <0,01 | 20 |
| | | 08.05.2025 | 7,2 | 5,1 | 1,9 | 0,23 | 0,78 | 1,3 | 0,32 | 0,49 | 0,22 | <0,01 | 0,37 | 0,17 | <0,01 | 18 |
| | | 02.06.2025 | 5,7 | 5,1 | 1,9 | 0,27 | 0,78 | 1,1 | 0,3 | 0,44 | 0,19 | <0,01 | 0,41 | 0,29 | <0,01 | 16 |
| | | 01.07.2025 | 3,4 | 4,6 | 1,4 | 0,23 | 0,68 | 0,99 | 0,23 | 0,33 | 0,13 | <0,01 | 0,36 | 0,23 | <0,01 | 13 |
| | | 31.07.2025 | 2,4 | 3,6 | 1,2 | 0,21 | 0,62 | 0,93 | 0,22 | 0,29 | 0,098 | <0,01 | 0,3 | 0,15 | <0,01 | 10 |
| | | 28.08.2025 | 2,4 | 2,9 | 0,94 | 0,17 | 0,51 | 0,73 | 0,18 | 0,25 | 0,092 | <0,01 | 0,23 | 0,13 | <0,01 | 8,5 |
| | | 25.09.2025 | 14 | 3 | 1 | 0,14 | 0,42 | 0,57 | 0,16 | 0,25 | 0,45 | <0,01 | 0,18 | 0,29 | <0,01 | 20 |
| GWM 39 | Grundwasser | 26.03.2024 | 0,036 | 0,091 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,127 |
| | | 17.10.2024 | 0,048 | 0,11 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,16 |
| | | 28.10.2024 | 0,078 | 0,178 | 0,058 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,32 |
| | | 04.11.2024 | 0,034 | 0,07 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,1 |
| | | 03.12.2024 | 0,02 | 0,057 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,077 |
| | | 13.01.2025 | 0,039 | 0,1 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,14 |
| | | 11.02.2025 | 0,036 | 0,089 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,13 |
| | | 10.03.2025 | 0,036 | 0,088 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,12 |
| | | 09.04.2025 | 0,035 | 0,096 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,13 |
| | | 08.05.2025 | 0,036 | 0,077 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,11 |
| | | 02.06.2025 | 0,039 | 0,09 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,13 |
| | | 01.07.2025 | 0,039 | 0,097 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,14 |
| | | 31.07.2025 | 0,036 | 0,094 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,13 |
| | | 28.08.2025 | 0,036 | 0,083 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,12 |
| | | 25.09.2025 | 0,035 | 0,094 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,13 |

[redacted]

| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 40 | Grundwasser | 26.03.2024 | 3,1 | 5,8 | 0,98 | 0,16 | 0,5 | 0,69 | 0,19 | 0,35 | 0,31 | <0,01 | 0,32 | 0,42 | <0,01 | 12,82 |
| | | 17.10.2024 | 3,4 | 5,1 | 0,55 | 0,11 | 0,35 | 0,59 | 0,13 | 0,3 | 0,27 | <0,01 | 0,31 | 0,37 | <0,01 | 11 |
| | | 29.10.2024 | 6,8 | 10,8 | 1,22 | 0,24 | 0,68 | 1,24 | 0,24 | 0,66 | 0,58 | <0,01 | 0,64 | 0,8 | <0,01 | 24 |
| | | 05.11.2024 | 1,5 | 3,3 | 0,2 | 0,12 | 0,32 | 0,52 | 0,079 | 0,12 | 0,099 | <0,01 | 0,28 | 0,13 | <0,01 | 6,7 |
| | | 05.12.2024 | 3 | 5,2 | 0,47 | 0,11 | 0,31 | 0,54 | 0,11 | 0,29 | 0,26 | <0,01 | 0,28 | 0,35 | <0,01 | 11 |
| | | 14.01.2025 | 3,1 | 4,8 | 0,51 | 0,11 | 0,34 | 0,56 | 0,13 | 0,33 | 0,27 | <0,01 | 0,31 | 0,36 | <0,01 | 11 |
| | | 12.02.2025 | 2,8 | 4,8 | 0,5 | 0,1 | 0,29 | 0,53 | 0,1 | 0,2 | 0,23 | <0,01 | 0,29 | 0,25 | <0,01 | 10 |
| | | 11.03.2025 | 2,3 | 4 | 0,38 | 0,088 | 0,25 | 0,43 | 0,11 | 0,24 | 0,18 | <0,01 | 0,25 | 0,26 | <0,01 | 8,5 |
| | | 10.04.2025 | 2,2 | 4,1 | 0,41 | 0,089 | 0,27 | 0,49 | 0,11 | 0,25 | 0,19 | <0,01 | 0,26 | 0,21 | <0,01 | 8,6 |
| | | 08.05.2025 | 2,3 | 3,9 | 0,38 | 0,086 | 0,27 | 0,49 | 0,12 | 0,25 | 0,21 | <0,01 | 0,27 | 0,15 | <0,01 | 8,4 |
| | | 02.06.2025 | 2,4 | 4,2 | 0,4 | 0,1 | 0,27 | 0,46 | 0,11 | 0,25 | 0,21 | <0,01 | 0,29 | 0,28 | <0,01 | 9 |
| | | 01.07.2025 | 2,5 | 4,1 | 0,35 | 0,097 | 0,25 | 0,46 | 0,086 | 0,21 | 0,21 | <0,01 | 0,3 | 0,27 | <0,01 | 8,8 |
| | | 31.07.2025 | 2 | 3,5 | 0,32 | 0,092 | 0,25 | 0,44 | 0,091 | 0,21 | 0,18 | <0,01 | 0,25 | 0,22 | <0,01 | 7,6 |
| | | 28.08.2025 | 1,9 | 3,3 | 0,28 | 0,086 | 0,24 | 0,42 | 0,086 | 0,21 | 0,15 | <0,01 | 0,23 | 0,19 | <0,01 | 7,1 |
| | | 25.09.2025 | 1,8 | 3 | 0,27 | 0,081 | 0,22 | 0,36 | 0,085 | 0,16 | 0,15 | <0,01 | 0,19 | 0,2 | <0,01 | 6,5 |
| GWM 70 | Grundwasser | 26.03.2024 | 8,7 | 13 | 2 | 0,46 | 1,6 | 1,8 | 0,45 | 0,81 | 0,71 | <0,01 | 0,48 | 1,1 | <0,01 | 31,11 |
| | | 16.10.2024 | 16 | 9,8 | 1,6 | 0,32 | 1,1 | 1,3 | 0,38 | 0,77 | 0,83 | <0,01 | 0,31 | 1,1 | <0,01 | 34 |
| | | 28.10.2024 | 19,4 | 16,2 | 2,6 | 0,48 | 1,58 | 2,2 | 0,46 | 1,12 | 1,16 | <0,01 | 0,64 | 1,54 | <0,01 | 48 |
| | | 04.11.2024 | 10 | 5,9 | 0,77 | 0,21 | 0,68 | 0,93 | 0,21 | 0,61 | 0,51 | <0,01 | 0,31 | 0,56 | <0,01 | 21 |
| | | 03.12.2024 | 7,3 | 8 | 1,4 | 0,23 | 0,65 | 1,1 | 0,25 | 0,61 | 0,6 | <0,01 | 0,47 | 0,61 | <0,01 | 21 |
| | | 13.01.2025 | 6,2 | 8,8 | 1,4 | 0,27 | 0,75 | 1,5 | 0,4 | 0,74 | 0,53 | <0,01 | 0,64 | 0,64 | <0,01 | 22 |
| | | 12.02.2025 | 6 | 8,7 | 1,8 | 0,24 | 0,63 | 1,2 | 0,24 | 0,45 | 0,45 | <0,01 | 0,56 | 0,44 | <0,01 | 21 |
| | | 10.03.2025 | 5,9 | 9 | 1,7 | 0,24 | 0,68 | 1,3 | 0,32 | 0,68 | 0,53 | <0,01 | 0,56 | 0,65 | <0,01 | 22 |
| | | 10.04.2025 | 6,1 | 8,9 | 1,8 | 0,24 | 0,72 | 1,3 | 0,32 | 0,68 | 0,52 | <0,01 | 0,57 | 0,54 | <0,01 | 22 |
| | | 08.05.2025 | 6,2 | 7,8 | 1,4 | 0,2 | 0,63 | 1,2 | 0,3 | 0,65 | 0,45 | <0,01 | 0,5 | 0,32 | <0,01 | 20 |
| | | 02.06.2025 | 5,6 | 8 | 1,4 | 0,23 | 0,62 | 1,1 | 0,29 | 0,6 | 0,48 | <0,01 | 0,56 | 0,61 | <0,01 | 19 |
| | | 01.07.2025 | 4,7 | 7,8 | 1,3 | 0,22 | 0,58 | 1,1 | 0,2 | 0,51 | 0,44 | <0,01 | 0,54 | 0,57 | <0,01 | 18 |
| | | 31.07.2025 | 3,8 | 6,5 | 1,2 | 0,21 | 0,58 | 1,1 | 0,23 | 0,51 | 0,44 | <0,01 | 0,51 | 0,47 | <0,01 | 16 |
| | | 28.08.2025 | 4 | 6,8 | 1,1 | 0,2 | 0,56 | 1 | 0,22 | 0,5 | 0,36 | <0,01 | 0,44 | 0,39 | <0,01 | 16 |
| | | 25.09.2025 | 3,9 | 6,1 | 1,1 | 0,21 | 0,58 | 0,95 | 0,26 | 0,42 | 0,41 | <0,01 | 0,4 | 0,42 | <0,01 | 15 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 71 | Grundwasser | 26.03.2024 | 0,077 | 1,1 | <0,01 | 0,011 | 0,019 | 0,078 | 0,019 | 0,14 | <0,01 | <0,01 | 0,033 | 0,013 | <0,01 | 1,49 |
| | | 17.10.2024 | 0,18 | 1,3 | <0,01 | <0,01 | 0,013 | 0,074 | 0,017 | 0,14 | <0,01 | <0,01 | 0,033 | 0,024 | <0,01 | 1,8 |
| | | 28.10.2024 | 0,36 | 2,8 | <0,01 | <0,01 | 0,03 | 0,152 | 0,04 | 0,36 | <0,01 | <0,01 | 0,068 | 0,056 | <0,01 | 3,8 |
| | | 04.11.2024 | 0,15 | 1,2 | <0,01 | 0,01 | 0,011 | 0,067 | <0,01 | 0,11 | <0,01 | <0,01 | 0,03 | 0,018 | <0,01 | 1,6 |
| | | 03.12.2024 | 0,21 | 1,1 | <0,01 | <0,01 | 0,011 | 0,061 | 0,012 | 0,097 | <0,01 | <0,01 | 0,028 | 0,027 | <0,01 | 1,5 |
| | | 13.01.2025 | 0,17 | 0,94 | <0,01 | <0,01 | <0,01 | 0,047 | 0,013 | 0,083 | <0,01 | <0,01 | 0,025 | 0,021 | <0,01 | 1,3 |
| | | 11.02.2025 | 0,14 | 0,75 | <0,01 | <0,01 | <0,01 | 0,039 | <0,01 | 0,034 | <0,01 | <0,01 | 0,023 | 0,014 | <0,01 | 1 |
| | | 10.03.2025 | 0,14 | 0,83 | <0,01 | <0,01 | <0,01 | 0,043 | 0,012 | 0,078 | <0,01 | <0,01 | 0,023 | 0,019 | <0,01 | 1,1 |
| | | 09.04.2025 | 0,13 | 0,81 | <0,01 | <0,01 | <0,01 | 0,045 | 0,01 | 0,081 | <0,01 | <0,01 | 0,024 | 0,014 | <0,01 | 1,1 |
| | | 08.05.2025 | 0,12 | 0,65 | <0,01 | <0,01 | <0,01 | 0,044 | <0,01 | 0,059 | <0,01 | <0,01 | 0,024 | <0,01 | <0,01 | 0,9 |
| | | 02.06.2025 | 0,11 | 0,72 | <0,01 | <0,01 | <0,01 | 0,044 | <0,01 | 0,073 | <0,01 | <0,01 | 0,027 | 0,016 | <0,01 | 0,99 |
| | | 01.07.2025 | 0,1 | 0,61 | <0,01 | <0,01 | <0,01 | 0,037 | <0,01 | 0,028 | <0,01 | <0,01 | 0,026 | 0,014 | <0,01 | 0,82 |
| | | 31.07.2025 | 0,11 | 0,71 | <0,01 | <0,01 | <0,01 | 0,045 | <0,01 | 0,055 | <0,01 | <0,01 | 0,028 | 0,016 | <0,01 | 0,96 |
| | | 28.08.2025 | 0,11 | 0,69 | <0,01 | <0,01 | <0,01 | 0,043 | <0,01 | 0,058 | <0,01 | <0,01 | 0,02 | 0,014 | <0,01 | 0,94 |
| | | 25.09.2025 | 0,11 | 0,65 | <0,01 | <0,01 | <0,01 | 0,034 | <0,01 | 0,035 | <0,01 | <0,01 | 0,021 | 0,015 | <0,01 | 0,87 |
| GWM 78A | Grundwasser | 27.03.2024 | 18 | 32 | 15 | 1,4 | 3,7 | 7,6 | 1,5 | 2,4 | 1,2 | <0,01 | 2 | 1,3 | <0,01 | 86,1 |
| | | 28.10.2024 | 40 | 42 | 12,2 | 1,58 | 3,6 | 7,6 | 1,82 | 2,6 | 1,76 | <0,01 | 3,6 | 1,64 | <0,01 | 118 |
| | | 04.11.2024 | 15 | 22 | 5,1 | 0,83 | 1,8 | 4,5 | 0,98 | 1,1 | 0,74 | <0,01 | 1,7 | 0,73 | <0,01 | 54 |
| | | 03.12.2024 | 18 | 11 | 5,2 | 1,1 | 3,3 | 3,7 | 0,74 | 1,1 | 0,47 | <0,01 | 0,83 | 0,63 | <0,01 | 46 |
| | | 13.01.2025 | 56 | 6,4 | 2,1 | 0,54 | 1,9 | 1,9 | 0,82 | 1,1 | 0,71 | 0,036 | 0,27 | 0,49 | 0,036 | 72 |
| | | 10.03.2025 | 21 | 13 | 6,8 | 2,2 | 7,7 | 8 | 1,9 | 1,7 | 0,61 | <0,01 | 1 | 0,79 | <0,01 | 65 |
| | | 10.04.2025 | 24 | 19 | 7,4 | 2,5 | 8,4 | 9,5 | 2,7 | 2 | 0,67 | <0,01 | 1,4 | 0,65 | <0,01 | 78 |
| | | 08.05.2025 | 31 | 15 | 7,8 | 2 | 7,9 | 8,3 | 2,7 | 2 | 0,49 | <0,01 | 1 | 0,34 | <0,01 | 79 |
| | | 02.06.2025 | 21 | 11 | 6 | 1,8 | 7 | 6,5 | 2 | 1,9 | 0,49 | <0,01 | 0,84 | 0,56 | <0,01 | 59 |
| | | 01.07.2025 | 22 | 13 | 6 | 1,7 | 5,6 | 5,3 | 1,4 | 1,7 | 0,33 | <0,01 | 0,78 | 0,6 | <0,01 | 58 |
| | | 31.07.2025 | 27 | 12 | 5 | 1,7 | 5,7 | 5,6 | 1,7 | 1,9 | 0,5 | <0,01 | 0,8 | 0,74 | <0,01 | 63 |
| | | 28.08.2025 | 19 | 11 | 5 | 1,6 | 5 | 4,9 | 1,7 | 1,8 | 0,44 | <0,01 | 0,77 | 0,57 | <0,01 | 52 |
| | | 25.09.2025 | 130 | 17 | 2,7 | 1,2 | 4,6 | 5 | 1,9 | 2 | 1,5 | 0,081 | 0,74 | 1,1 | 0,066 | 170 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 78B | Grundwasser | 27.03.2024 | 0,3 | 0,34 | 0,03 | 0,012 | 0,023 | 0,046 | <0,01 | 0,016 | 0,032 | <0,01 | 0,028 | 0,017 | <0,01 | 0,844 |
| | | 17.10.2024 | 0,26 | 0,51 | 0,061 | 0,017 | 0,033 | 0,07 | 0,014 | 0,035 | 0,025 | <0,01 | 0,047 | 0,026 | <0,01 | 1,1 |
| | | 28.10.2024 | 0,84 | 1,6 | 0,28 | 0,056 | 0,12 | 0,24 | 0,052 | 0,108 | 0,106 | <0,01 | 0,146 | 0,1 | <0,01 | 3,6 |
| | | 04.11.2024 | 0,53 | 0,69 | 0,11 | 0,016 | 0,058 | 0,12 | 0,015 | 0,044 | 0,047 | <0,01 | 0,065 | 0,059 | <0,01 | 1,8 |
| | | 03.12.2024 | 0,48 | 0,82 | 0,15 | 0,029 | 0,065 | 0,13 | 0,025 | 0,059 | 0,054 | <0,01 | 0,077 | 0,056 | <0,01 | 1,9 |
| | | 13.01.2025 | 0,51 | 0,84 | 0,15 | 0,028 | 0,061 | 0,13 | 0,025 | 0,056 | 0,058 | <0,01 | 0,075 | 0,051 | <0,01 | 2 |
| | | 11.02.2025 | 0,41 | 0,66 | 0,13 | 0,032 | 0,053 | 0,1 | 0,018 | 0,033 | 0,047 | <0,01 | 0,063 | 0,033 | <0,01 | 1,6 |
| | | 10.03.2025 | 0,43 | 0,61 | 0,11 | 0,021 | 0,048 | 0,096 | 0,022 | 0,04 | 0,046 | <0,01 | 0,055 | 0,042 | <0,01 | 1,5 |
| | | 09.04.2025 | 0,45 | 0,63 | 0,13 | 0,024 | 0,054 | 0,11 | 0,023 | 0,043 | 0,047 | <0,01 | 0,062 | 0,034 | <0,01 | 1,6 |
| | | 08.05.2025 | 0,38 | 0,54 | 0,11 | 0,026 | 0,047 | 0,11 | 0,022 | 0,039 | 0,039 | <0,01 | 0,056 | 0,019 | <0,01 | 1,4 |
| | | 02.06.2025 | 0,47 | 0,61 | 0,13 | 0,027 | 0,058 | 0,11 | 0,023 | 0,046 | 0,05 | <0,01 | 0,067 | 0,04 | <0,01 | 1,6 |
| | | 01.07.2025 | 0,51 | 0,64 | 0,12 | 0,026 | 0,059 | 0,11 | 0,022 | 0,039 | 0,057 | <0,01 | 0,072 | 0,043 | <0,01 | 1,7 |
| | | 31.07.2025 | 0,44 | 0,59 | 0,12 | 0,027 | 0,059 | 0,11 | 0,021 | 0,04 | 0,047 | <0,01 | 0,07 | 0,036 | <0,01 | 1,6 |
| | | 28.08.2025 | 0,39 | 0,58 | 0,095 | 0,028 | 0,057 | 0,12 | 0,021 | 0,041 | 0,042 | <0,01 | 0,061 | 0,033 | <0,01 | 1,5 |
| | | 25.09.2025 | 0,38 | 0,59 | 0,088 | 0,027 | 0,054 | 0,1 | 0,021 | 0,034 | 0,045 | <0,01 | 0,061 | 0,037 | <0,01 | 1,4 |
| GWM 79A | Grundwasser | 05.11.2024 | 0,36 | 0,44 | 0,028 | 0,012 | 0,056 | 0,048 | 0,017 | 0,023 | 0,015 | <0,01 | 0,015 | 0,027 | <0,01 | 1 |
| | | 03.12.2024 | 0,076 | 0,21 | <0,01 | 0,013 | 0,05 | 0,034 | 0,015 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,4 |
| | | 14.01.2025 | 0,15 | 0,15 | <0,01 | <0,01 | 0,025 | 0,023 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,35 |
| | | 11.02.2025 | 0,098 | 0,13 | <0,01 | <0,01 | 0,025 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,25 |
| | | 10.03.2025 | 0,12 | 0,21 | <0,01 | 0,016 | 0,045 | 0,031 | 0,013 | 0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,45 |
| | | 09.04.2025 | 0,097 | 0,18 | <0,01 | 0,016 | 0,049 | 0,03 | 0,014 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,4 |
| | | 08.05.2025 | 0,12 | 0,18 | <0,01 | 0,016 | 0,038 | 0,027 | 0,015 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,41 |
| | | 02.06.2025 | 0,088 | 0,15 | <0,01 | 0,017 | 0,038 | 0,023 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,33 |
| | | 01.07.2025 | 0,12 | 0,16 | <0,01 | 0,015 | 0,038 | 0,022 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,36 |
| | | 31.07.2025 | 0,092 | 0,12 | <0,01 | 0,017 | 0,036 | 0,02 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,29 |
| | | 28.08.2025 | 0,09 | 0,12 | <0,01 | 0,018 | 0,038 | 0,024 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,29 |
| | | 25.09.2025 | 0,076 | 0,1 | <0,01 | 0,017 | 0,039 | 0,025 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,26 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 80A | Grundwasser | 27.03.2024 | 3 | 9,4 | 1,6 | 0,29 | 0,78 | 1,6 | 0,31 | 0,56 | 0,46 | <0,01 | 0,82 | 0,46 | <0,01 | 19,28 |
| | | 17.10.2024 | 2,9 | 15 | 2,5 | 0,5 | 1,2 | 3 | 0,67 | 0,83 | 0,56 | <0,01 | 1,8 | 0,64 | <0,01 | 30 |
| | | 29.10.2024 | 11,8 | 136 | 22 | 3,8 | 9 | 22 | 4,4 | 8,6 | 5,2 | <0,01 | 10,2 | 4,8 | <0,01 | 240 |
| | | 05.11.2024 | 12 | 72 | 12 | 2,2 | 6,2 | 14 | 3,1 | 5,3 | 3,1 | <0,01 | 7 | 4,1 | <0,01 | 140 |
| | | 05.12.2024 | 16 | 100 | 25 | 2,7 | 7,2 | 16 | 3,7 | 11 | 3,5 | <0,01 | 7,7 | 6,3 | <0,01 | 200 |
| | | 14.01.2025 | 12 | 140 | 24 | 2,9 | 7,6 | 16 | 4,4 | 10 | 3,6 | <0,01 | 8,2 | 5,8 | <0,01 | 230 |
| | | 11.02.2025 | 12 | 150 | 32 | 2,9 | 8,2 | 18 | 3,6 | 12 | 4 | <0,01 | 9 | 7 | <0,01 | 260 |
| | | 11.03.2025 | 9,1 | 140 | 27 | 2,8 | 8,5 | 18 | 4,5 | 11 | 2,7 | <0,01 | 8,7 | 5,4 | <0,01 | 240 |
| | | 09.04.2025 | 9,3 | 140 | 27 | 3,1 | 8,7 | 18 | 4,1 | 8,8 | 3,1 | <0,01 | 8,2 | 6 | <0,01 | 240 |
| | | 08.05.2025 | 14 | 120 | 26 | 2,5 | 8,1 | 16 | 4,9 | 10 | 3,3 | <0,01 | 7,8 | 4,8 | <0,01 | 220 |
| | | 02.06.2025 | 11 | 110 | 21 | 3 | 8,5 | 18 | 4,8 | 8,8 | 2,9 | <0,01 | 9,9 | 5,7 | <0,01 | 200 |
| | | 01.07.2025 | 15 | 120 | 22 | 3,1 | 8,5 | 17 | 3,2 | 8,9 | 4,2 | <0,01 | 10 | 5,8 | <0,01 | 220 |
| | | 31.07.2025 | 24 | 110 | 22 | 3,2 | 7,9 | 17 | 3,5 | 8,3 | 5,3 | <0,01 | 9,5 | 5,9 | <0,01 | 220 |
| | | 28.08.2025 | 28 | 97 | 19 | 2,9 | 7,3 | 16 | 3,6 | 7,2 | 5,6 | <0,01 | 7,6 | 4,9 | <0,01 | 200 |
| | | 25.09.2025 | 24 | 96 | 22 | 2,9 | 8,5 | 16 | 4 | 7,9 | 6,5 | <0,01 | 7 | 6,5 | <0,01 | 200 |
| GWM 81A | Grundwasser | 26.03.2024 | 0,15 | 0,41 | <0,01 | <0,01 | <0,01 | 0,017 | <0,01 | 0,01 | <0,01 | <0,01 | 0,013 | 0,012 | <0,01 | 0,612 |
| | | 17.10.2024 | 0,15 | 0,42 | <0,01 | <0,01 | <0,01 | 0,012 | <0,01 | <0,01 | <0,01 | <0,01 | 0,013 | 0,012 | <0,01 | 0,61 |
| | | 28.10.2024 | 0,28 | 0,94 | <0,01 | <0,01 | <0,01 | 0,028 | <0,01 | 0,022 | <0,01 | <0,01 | 0,026 | 0,028 | <0,01 | 1,32 |
| | | 04.11.2024 | 0,12 | 0,38 | <0,01 | 0,059 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,012 | <0,01 | <0,01 | 0,57 |
| | | 03.12.2024 | 0,12 | 0,46 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | <0,01 | <0,01 | <0,01 | 0,013 | 0,013 | <0,01 | 0,62 |
| | | 13.01.2025 | 0,11 | 0,47 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | 0,011 | <0,01 | <0,01 | 0,013 | 0,012 | <0,01 | 0,63 |
| | | 11.02.2025 | 0,084 | 0,37 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,011 | <0,01 | <0,01 | 0,47 |
| | | 10.03.2025 | 0,09 | 0,35 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,01 | <0,01 | <0,01 | 0,45 |
| | | 09.04.2025 | 0,084 | 0,38 | <0,01 | <0,01 | <0,01 | 0,014 | <0,01 | 0,011 | <0,01 | <0,01 | 0,013 | <0,01 | <0,01 | 0,5 |
| | | 08.05.2025 | 0,084 | 0,32 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,011 | <0,01 | <0,01 | 0,42 |
| | | 02.06.2025 | 0,092 | 0,34 | <0,01 | <0,01 | <0,01 | 0,012 | <0,01 | 0,01 | <0,01 | <0,01 | 0,013 | 0,01 | <0,01 | 0,48 |
| | | 01.07.2025 | 0,093 | 0,33 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | 0,012 | <0,01 | <0,01 | 0,015 | 0,011 | <0,01 | 0,47 |
| | | 31.07.2025 | 0,081 | 0,32 | <0,01 | <0,01 | <0,01 | 0,016 | <0,01 | <0,01 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | 0,43 |
| | | 28.08.2025 | 0,076 | 0,33 | <0,01 | <0,01 | <0,01 | 0,014 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,42 |
| | | 25.09.2025 | 0,064 | 0,31 | <0,01 | <0,01 | <0,01 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | 0,012 | <0,01 | <0,01 | 0,4 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 82A | Grundwasser | 26.03.2024 | 4,4 | 6,5 | 0,89 | 0,18 | 0,6 | 0,79 | 0,19 | 0,37 | 0,3 | <0,01 | 0,3 | 0,46 | <0,01 | 14,98 |
| | | 17.10.2024 | 2,9 | 4,5 | 0,48 | 0,12 | 0,36 | 0,51 | 0,13 | 0,24 | 0,17 | <0,01 | 0,21 | 0,25 | <0,01 | 9,9 |
| | | 28.10.2024 | 5,8 | 8,4 | 1,12 | 0,24 | 0,76 | 0,98 | 0,24 | 0,54 | 0,4 | <0,01 | 0,46 | 0,6 | <0,01 | 19,6 |
| | | 04.11.2024 | 2,5 | 3,8 | 0,33 | 0,13 | 0,37 | 0,51 | 0,096 | 0,23 | 0,15 | <0,01 | 0,21 | 0,26 | <0,01 | 8,6 |
| | | 03.12.2024 | 2,9 | 3,9 | 0,51 | 0,11 | 0,34 | 0,49 | 0,11 | 0,25 | 0,18 | <0,01 | 0,2 | 0,27 | <0,01 | 9,3 |
| | | 13.01.2025 | 2,6 | 3,7 | 0,44 | 0,11 | 0,34 | 0,46 | 0,12 | 0,25 | 0,16 | <0,01 | 0,2 | 0,28 | <0,01 | 8,7 |
| | | 11.02.2025 | 2,3 | 3,6 | 0,45 | 0,1 | 0,3 | 0,41 | 0,092 | 0,15 | 0,16 | <0,01 | 0,18 | 0,18 | <0,01 | 7,9 |
| | | 10.03.2025 | 2,5 | 3,6 | 0,47 | 0,1 | 0,31 | 0,43 | 0,12 | 0,22 | 0,16 | <0,01 | 0,18 | 0,25 | <0,01 | 8,3 |
| | | 09.04.2025 | 2,5 | 3,8 | 0,47 | 0,1 | 0,34 | 0,46 | 0,12 | 0,23 | 0,16 | <0,01 | 0,19 | 0,2 | <0,01 | 8,6 |
| | | 08.05.2025 | 2,4 | 3,1 | 0,43 | 0,093 | 0,31 | 0,45 | 0,13 | 0,21 | 0,15 | <0,01 | 0,18 | 0,13 | <0,01 | 7,6 |
| | | 02.06.2025 | 2,3 | 3,5 | 0,42 | 0,1 | 0,31 | 0,41 | 0,11 | 0,2 | 0,15 | <0,01 | 0,2 | 0,22 | <0,01 | 7,9 |
| | | 01.07.2025 | 2,3 | 3,4 | 0,39 | 0,1 | 0,3 | 0,4 | 0,094 | 0,19 | 0,15 | <0,01 | 0,2 | 0,23 | <0,01 | 7,8 |
| | | 31.07.2025 | 2,2 | 3,1 | 0,37 | 0,11 | 0,31 | 0,41 | 0,11 | 0,18 | 0,14 | <0,01 | 0,2 | 0,19 | <0,01 | 7,3 |
| | | 28.08.2025 | 2,3 | 3,1 | 0,37 | 0,094 | 0,28 | 0,39 | 0,11 | 0,18 | 0,15 | <0,01 | 0,17 | 0,2 | <0,01 | 7,3 |
| | | 25.09.2025 | 2 | 3 | 0,37 | 0,095 | 0,28 | 0,37 | 0,1 | 0,18 | 0,13 | <0,01 | 0,16 | 0,2 | <0,01 | 6,9 |
| GWM 84A | Grundwasser | 25.03.2024 | 1,8 | 5,1 | 0,84 | 0,21 | 0,71 | 0,72 | 0,22 | 0,31 | 0,077 | <0,01 | 0,12 | 0,22 | <0,01 | 10,327 |
| | | 16.10.2024 | 1,7 | 4,6 | 1,3 | 0,21 | 0,74 | 0,71 | 0,29 | 0,41 | 0,084 | <0,01 | 0,11 | 0,17 | <0,01 | 10 |
| | | 28.10.2024 | 3,4 | 9,2 | 2,6 | 0,44 | 1,62 | 1,42 | 0,5 | 0,72 | 0,152 | <0,01 | 0,24 | 0,34 | <0,01 | 20 |
| | | 04.11.2024 | 1,3 | 4 | 0,77 | 0,2 | 0,77 | 0,73 | 0,2 | 0,25 | 0,059 | <0,01 | 0,11 | 0,12 | <0,01 | 8,5 |
| | | 03.12.2024 | 1,6 | 4,1 | 1,1 | 0,19 | 0,69 | 0,66 | 0,23 | 0,33 | 0,05 | <0,01 | 0,096 | 0,15 | <0,01 | 9,2 |
| | | 13.01.2025 | 1,2 | 3,5 | 0,7 | 0,17 | 0,62 | 0,58 | 0,2 | 0,27 | 0,038 | <0,01 | 0,09 | 0,1 | <0,01 | 7,5 |
| | | 11.02.2025 | 1,1 | 3,7 | 0,76 | 0,16 | 0,6 | 0,59 | 0,2 | 0,27 | 0,03 | <0,01 | 0,086 | 0,11 | <0,01 | 7,6 |
| | | 10.03.2025 | 0,98 | 3,5 | 0,88 | 0,16 | 0,58 | 0,55 | 0,19 | 0,25 | 0,027 | <0,01 | 0,084 | 0,1 | <0,01 | 7,3 |
| | | 09.04.2025 | 1,2 | 4,4 | 0,96 | 0,17 | 0,65 | 0,67 | 0,23 | 0,31 | 0,033 | <0,01 | 0,1 | 0,13 | <0,01 | 8,9 |
| | | 08.05.2025 | 1,2 | 4,4 | 1 | 0,18 | 0,68 | 0,68 | 0,27 | 0,37 | 0,04 | <0,01 | 0,095 | 0,095 | <0,01 | 9 |
| | | 02.06.2025 | 1,2 | 4,2 | 0,82 | 0,19 | 0,65 | 0,63 | 0,23 | 0,33 | 0,044 | <0,01 | 0,11 | 0,18 | <0,01 | 8,6 |
| | | 01.07.2025 | 1,2 | 3,7 | 0,67 | 0,17 | 0,57 | 0,57 | 0,17 | 0,26 | 0,038 | <0,01 | 0,097 | 0,15 | <0,01 | 7,6 |
| | | 31.07.2025 | 1,1 | 3,5 | 0,57 | 0,17 | 0,62 | 0,6 | 0,18 | 0,25 | 0,038 | <0,01 | 0,098 | 0,13 | <0,01 | 7,3 |
| | | 28.08.2025 | 0,91 | 3,1 | 0,46 | 0,15 | 0,51 | 0,5 | 0,16 | 0,22 | 0,034 | <0,01 | 0,074 | 0,11 | <0,01 | 6,2 |
| | | 25.09.2025 | 0,74 | 3,2 | 0,41 | 0,15 | 0,54 | 0,52 | 0,17 | 0,22 | 0,026 | <0,01 | 0,079 | 0,1 | <0,01 | 6,2 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 84B | Grundwasser | 25.03.2024 | 0,072 | 0,7 | <0,01 | <0,01 | 0,015 | 0,055 | 0,011 | 0,062 | <0,01 | <0,01 | 0,029 | 0,014 | <0,01 | 0,958 |
| | | 16.10.2024 | 0,097 | 0,82 | <0,01 | <0,01 | 0,019 | 0,069 | 0,017 | 0,13 | <0,01 | <0,01 | 0,035 | 0,015 | <0,01 | 1,2 |
| | | 28.10.2024 | 0,192 | 1,9 | 0,022 | 0,02 | 0,042 | 0,146 | 0,036 | 0,22 | <0,01 | <0,01 | 0,078 | 0,036 | <0,01 | 2,6 |
| | | 04.11.2024 | 0,097 | 0,84 | 0,013 | <0,01 | 0,014 | 0,062 | 0,011 | 0,085 | <0,01 | <0,01 | 0,036 | 0,014 | <0,01 | 1,2 |
| | | 03.12.2024 | 0,071 | 0,7 | <0,01 | <0,01 | 0,014 | 0,049 | 0,011 | 0,079 | <0,01 | <0,01 | 0,024 | 0,012 | <0,01 | 0,96 |
| | | 13.01.2025 | 0,053 | 0,52 | <0,01 | <0,01 | <0,01 | 0,037 | <0,01 | 0,064 | <0,01 | <0,01 | 0,02 | <0,01 | <0,01 | 0,69 |
| | | 11.02.2025 | 0,049 | 0,41 | <0,01 | <0,01 | <0,01 | 0,033 | <0,01 | 0,052 | <0,01 | <0,01 | 0,018 | <0,01 | <0,01 | 0,56 |
| | | 10.03.2025 | 0,037 | 0,37 | <0,01 | <0,01 | <0,01 | 0,025 | <0,01 | 0,037 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | 0,48 |
| | | 09.04.2025 | 0,035 | 0,36 | <0,01 | <0,01 | <0,01 | 0,025 | <0,01 | 0,036 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | 0,47 |
| | | 08.05.2025 | 0,033 | 0,34 | <0,01 | <0,01 | <0,01 | 0,025 | <0,01 | 0,032 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | 0,45 |
| | | 02.06.2025 | 0,036 | 0,3 | <0,01 | <0,01 | <0,01 | 0,02 | <0,01 | 0,029 | <0,01 | <0,01 | 0,016 | <0,01 | <0,01 | 0,4 |
| | | 01.07.2025 | 0,036 | 0,32 | <0,01 | <0,01 | <0,01 | 0,02 | <0,01 | 0,03 | <0,01 | <0,01 | 0,016 | <0,01 | <0,01 | 0,42 |
| | | 31.07.2025 | 0,03 | 0,28 | <0,01 | <0,01 | <0,01 | 0,021 | <0,01 | 0,025 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | 0,37 |
| | | 28.08.2025 | 0,034 | 0,29 | <0,01 | <0,01 | <0,01 | 0,02 | <0,01 | 0,025 | <0,01 | <0,01 | 0,012 | <0,01 | <0,01 | 0,38 |
| | | 25.09.2025 | 0,031 | 0,29 | <0,01 | <0,01 | <0,01 | 0,018 | <0,01 | 0,024 | <0,01 | <0,01 | 0,014 | <0,01 | <0,01 | 0,38 |
| GWM 85A | Grundwasser | 26.03.2024 | 9,7 | 11 | 1,3 | 0,3 | 1 | 1,3 | 0,3 | 0,63 | 0,75 | <0,01 | 0,45 | 0,99 | <0,01 | 27,72 |
| | | 17.10.2024 | 9,5 | 13 | 1,5 | 0,29 | 0,89 | 1,4 | 0,41 | 0,65 | 0,67 | <0,01 | 0,64 | 0,88 | <0,01 | 30 |
| | | 29.10.2024 | 24 | 34 | 4,4 | 0,92 | 2,6 | 4,4 | 0,82 | 2,2 | 1,8 | <0,01 | 2,4 | 2,4 | <0,01 | 80 |
| | | 05.11.2024 | 16 | 22 | 2,2 | 0,37 | 1,6 | 2,3 | 0,45 | 1,5 | 1 | <0,01 | 1,4 | 1,2 | <0,01 | 50 |
| | | 05.12.2024 | 5,8 | 9,1 | 1,3 | 0,24 | 0,78 | 1 | 0,28 | 0,58 | 0,44 | <0,01 | 0,38 | 0,64 | <0,01 | 21 |
| | | 14.01.2025 | 6,1 | 9,4 | 1,3 | 0,24 | 0,73 | 0,89 | 0,23 | 0,53 | 0,39 | <0,01 | 0,35 | 0,74 | <0,01 | 21 |
| | | 12.02.2025 | 8,4 | 11 | 1,3 | 0,28 | 0,86 | 1,3 | 0,34 | 0,67 | 0,62 | <0,01 | 0,56 | 0,8 | <0,01 | 26 |
| | | 11.03.2025 | 8 | 11 | 1,6 | 0,26 | 0,86 | 1,1 | 0,33 | 0,7 | 0,67 | <0,01 | 0,42 | 1 | <0,01 | 26 |
| | | 10.04.2025 | 8,9 | 13 | 1,4 | 0,34 | 1,1 | 1,7 | 0,38 | 0,78 | 0,71 | <0,01 | 0,82 | 0,8 | <0,01 | 30 |
| | | 08.05.2025 | 9,8 | 10 | 1,4 | 0,27 | 0,94 | 1,3 | 0,37 | 0,7 | 0,73 | <0,01 | 0,5 | 0,57 | <0,01 | 27 |
| | | 02.06.2025 | 9,5 | 13 | 1,4 | 0,37 | 1,1 | 1,7 | 0,38 | 0,79 | 0,72 | <0,01 | 0,92 | 1 | <0,01 | 31 |
| | | 01.07.2025 | 10 | 10 | 1,1 | 0,28 | 0,86 | 1,1 | 0,21 | 0,56 | 0,66 | <0,01 | 0,49 | 0,98 | <0,01 | 26 |
| | | 31.07.2025 | 6,6 | 9,3 | 1,2 | 0,33 | 1 | 1,3 | 0,33 | 0,6 | 0,76 | <0,01 | 0,53 | 0,97 | <0,01 | 23 |
| | | 28.08.2025 | 8,9 | 11 | 1,3 | 0,37 | 1,1 | 1,6 | 0,3 | 0,74 | 0,82 | <0,01 | 0,7 | 0,98 | <0,01 | 28 |
| | | 25.09.2025 | 12 | 11 | 1,4 | 0,37 | 1,2 | 1,3 | 0,39 | 0,66 | 0,82 | <0,01 | 0,46 | 1,1 | <0,01 | 31 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 86 | Sickerwasser | 16.10.2024 | 16 | 6,2 | 1,1 | 0,5 | 1,6 | 2,1 | 0,6 | 0,55 | 1,1 | 0,02 | 0,37 | 0,29 | 0,01 | 30 |
| | | 28.10.2024 | 38 | 24 | 6,2 | 1,64 | 5,2 | 6,8 | 1,4 | 2,6 | 8,8 | 0,038 | 1,74 | 2,2 | <0,01 | 98 |
| | | 13.01.2025 | 18 | 4,6 | 1,2 | 0,32 | 0,99 | 1,1 | 0,37 | 0,6 | 3,3 | 0,022 | 0,23 | 0,47 | 0,017 | 31 |
| | | 10.03.2025 | 20 | 9,3 | 2,9 | 0,4 | 1,1 | 1,8 | 0,45 | 1,1 | 4,8 | 0,02 | 0,47 | 1 | 0,017 | 43 |
| | | 31.07.2025 | 13 | 12 | 4 | 0,73 | 1,7 | 3 | 0,63 | 1,7 | 5,8 | 0,018 | 0,96 | 1,1 | 0,012 | 45 |
| | | 25.09.2025 | 24 | 7,6 | 1,2 | 0,5 | 1,6 | 1,9 | 0,7 | 0,77 | 0,49 | 0,043 | 0,32 | 0,23 | 0,028 | 39 |
| GWM 87 | Sickerwasser | 13.01.2025 | 180 | 63 | 35 | 5,2 | 18 | 17 | 6,2 | 14 | 10 | 0,24 | 2,2 | 4,1 | 0,14 | 360 |
| GWM 88 | Sickerwasser | 02.04.2024 | 38 | 26 | 17 | 1,7 | 6,6 | 6,9 | 2,4 | 3,4 | 4 | <0,01 | 1,1 | 2,4 | <0,01 | 109,5 |
| | | 04.11.2024 | 26 | 12 | 3,9 | 0,84 | 3,2 | 2,7 | 0,82 | 1,1 | 0,46 | <0,01 | 0,57 | 0,91 | <0,01 | 53 |
| | | 03.12.2024 | 21 | 9,4 | 4,7 | 0,68 | 2,6 | 2,5 | 0,71 | 1,3 | 0,4 | <0,01 | 0,54 | 0,83 | <0,01 | 45 |
| | | 13.01.2025 | 110 | 66 | 20 | 4,2 | 15 | 15 | 5,5 | 8 | 5,9 | 0,12 | 2,6 | 2,4 | <0,01 | 250 |
| | | 12.02.2025 | 43 | 28 | 15 | 2,3 | 8,9 | 9,4 | 3,3 | 4 | 1,1 | 0,021 | 1,6 | 1,4 | <0,01 | 120 |
| | | 10.03.2025 | 49 | 29 | 15 | 2,7 | 9,8 | 10 | 3,2 | 4 | 2,2 | 0,031 | 1,8 | 2,1 | <0,01 | 130 |
| | | 10.04.2025 | 36 | 19 | 12 | 2 | 7,6 | 7,8 | 2,6 | 3,1 | 1 | 0,022 | 1,1 | 1,2 | <0,01 | 93 |
| | | 08.05.2025 | 31 | 12 | 6,4 | 1,1 | 4,7 | 4,3 | 1,6 | 1,8 | 0,54 | <0,01 | 0,71 | 0,54 | <0,01 | 65 |
| | | 02.06.2025 | 18 | 10 | 5,6 | 1,1 | 5,2 | 3,9 | 1,3 | 1,6 | 0,45 | <0,01 | 0,75 | 0,88 | <0,01 | 49 |
| | | 01.07.2025 | 18 | 9,8 | 3,6 | 0,85 | 3,1 | 2,9 | 0,74 | 0,97 | 0,24 | <0,01 | 0,68 | 0,74 | <0,01 | 42 |
| | | 31.07.2025 | 7,7 | 7,3 | 2,7 | 0,76 | 2,8 | 2,7 | 0,77 | 0,8 | 0,2 | <0,01 | 0,66 | 0,51 | <0,01 | 27 |
| | | 28.08.2025 | 7,6 | 6,6 | 2,6 | 0,68 | 2,4 | 2,4 | 0,63 | 0,75 | 0,17 | <0,01 | 0,51 | 0,48 | <0,01 | 25 |
| | | 25.09.2025 | 9 | 7,2 | 2,1 | 0,67 | 2,4 | 2,4 | 0,7 | 0,75 | 0,17 | <0,01 | 0,5 | 0,47 | <0,01 | 26 |
| GWM 90 | Sickerwasser | 02.04.2024 | 38 | 10 | 2,9 | 0,5 | 1,7 | 1,9 | 0,56 | 0,91 | 1,1 | <0,01 | 0,34 | 1,4 | 0,032 | 59,342 |
| | | 16.10.2024 | 28 | 4,4 | 1,7 | 0,33 | 1,1 | 1,1 | 0,42 | 0,48 | 0,45 | 0,047 | 0,16 | 0,3 | 0,047 | 39 |
| | | 13.01.2025 | 130 | 34 | 11 | 1,8 | 6,2 | 5,9 | 2,1 | 4,1 | 3,4 | 0,23 | 0,91 | 1,9 | <0,01 | 200 |
| | | 12.02.2025 | 79 | 16 | 3,2 | 0,74 | 2,4 | 2,8 | 0,81 | 1,2 | 1,1 | 0,089 | 0,49 | 0,97 | 0,034 | 110 |
| | | 10.03.2025 | 76 | 22 | 4,1 | 0,94 | 3,2 | 3,8 | 1,1 | 1,9 | 1,7 | 0,081 | 0,77 | 1,4 | 0,029 | 120 |
| | | 10.04.2025 | 24 | 18 | 7,2 | 2,4 | 8,3 | 9,7 | 2,6 | 2 | 0,66 | <0,01 | 1,4 | 0,7 | 0,013 | 77 |
| | | 08.05.2025 | 45 | 14 | 5 | 1,3 | 4,7 | 5 | 1,7 | 1,4 | 0,67 | 0,026 | 0,75 | 0,48 | 0,022 | 80 |
| | | 02.06.2025 | 30 | 16 | 7,1 | 2,2 | 8,4 | 8,5 | 2,4 | 2,1 | 0,65 | 0,021 | 1,2 | 0,79 | 0,024 | 79 |

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| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| GWM 91 | Sickerwasser | 27.03.2024 | 100 | 29 | 5 | 0,8 | 2,6 | 3,3 | 0,92 | 2,5 | 5,4 | 0,017 | 0,98 | 5,7 | <0,01 | 156,217 |
| | | 16.10.2024 | 2,4 | 1,9 | 0,019 | 0,15 | 0,35 | 0,32 | 0,09 | 0,07 | 0,03 | <0,01 | 0,14 | 0,057 | <0,01 | 5,5 |
| | | 28.10.2024 | 10 | 7,4 | 0,092 | 0,3 | 0,72 | 0,84 | 0,186 | 0,28 | 0,144 | <0,01 | 0,46 | 0,48 | <0,01 | 20 |
| | | 04.11.2024 | 3,9 | 3,3 | 0,042 | 0,12 | 0,28 | 0,34 | 0,071 | 0,14 | 0,044 | <0,01 | 0,19 | 0,17 | <0,01 | 8,6 |
| | | 03.12.2024 | 2,4 | 2,5 | <0,01 | 0,072 | 0,16 | 0,23 | 0,054 | 0,09 | 0,05 | <0,01 | 0,14 | 0,12 | <0,01 | 5,8 |
| | | 13.01.2025 | 1,1 | 1,6 | 0,054 | 0,12 | 0,3 | 0,28 | 0,087 | 0,083 | 0,019 | <0,01 | 0,11 | 0,053 | <0,01 | 3,8 |
| | | 12.02.2025 | 3,1 | 2,2 | 0,077 | 0,12 | 0,33 | 0,31 | 0,093 | 0,12 | 0,053 | <0,01 | 0,12 | 0,081 | <0,01 | 6,6 |
| | | 10.03.2025 | 13 | 5,5 | 0,72 | 0,18 | 0,53 | 0,65 | 0,19 | 0,36 | 0,44 | <0,01 | 0,22 | 0,71 | <0,01 | 23 |
| | | 10.04.2025 | 7,8 | 6,7 | 0,43 | 0,17 | 0,5 | 0,78 | 0,19 | 0,34 | 0,32 | <0,01 | 0,37 | 0,45 | <0,01 | 18 |
| | | 08.05.2025 | 5 | 4,5 | 0,14 | 0,13 | 0,4 | 0,57 | 0,14 | 0,22 | 0,19 | <0,01 | 0,28 | 0,18 | <0,01 | 12 |
| | | 02.06.2025 | 18 | 7,8 | 0,11 | 0,17 | 0,48 | 0,63 | 0,17 | 0,29 | 0,25 | <0,01 | 0,4 | 0,76 | <0,01 | 29 |
| | | 01.07.2025 | 15 | 9,9 | 0,79 | 0,23 | 0,61 | 0,93 | 0,18 | 0,58 | 0,49 | <0,01 | 0,56 | 0,96 | <0,01 | 30 |
| | | 31.07.2025 | 12 | 5 | 0,35 | 0,16 | 0,39 | 0,58 | 0,14 | 0,32 | 0,48 | <0,01 | 0,34 | 0,63 | <0,01 | 20 |
| | | 28.08.2025 | 8,6 | 2,3 | 0,052 | 0,095 | 0,16 | 0,21 | 0,05 | 0,1 | 0,11 | <0,01 | 0,1 | 0,17 | <0,01 | 12 |
| | | 25.09.2025 | 5,9 | 1,7 | <0,01 | 0,075 | 0,12 | 0,13 | 0,041 | 0,073 | 0,056 | <0,01 | 0,076 | 0,098 | <0,01 | 8,3 |
| GWM 92A | Grundwasser | 27.03.2024 | 0,79 | 0,77 | 0,057 | 0,024 | 0,085 | 0,095 | 0,029 | 0,044 | <0,01 | <0,01 | 0,028 | 0,029 | <0,01 | 1,951 |
| | | 17.10.2024 | 0,81 | 0,61 | 0,059 | 0,021 | 0,072 | 0,08 | 0,026 | 0,045 | <0,01 | <0,01 | 0,026 | 0,026 | <0,01 | 1,8 |
| | | 28.10.2024 | 0,48 | 0,68 | 0,038 | 0,036 | 0,124 | 0,132 | 0,032 | 0,038 | <0,01 | <0,01 | 0,052 | <0,01 | <0,01 | 1,62 |
| | | 05.11.2024 | 0,68 | 0,49 | 0,04 | 0,015 | 0,066 | 0,072 | 0,015 | 0,027 | <0,01 | <0,01 | 0,025 | 0,021 | <0,01 | 1,5 |
| | | 05.12.2024 | 1 | 0,68 | 0,076 | 0,025 | 0,095 | 0,1 | 0,032 | 0,049 | 0,015 | <0,01 | 0,029 | 0,031 | <0,01 | 2,1 |
| | | 14.01.2025 | 0,72 | 0,6 | 0,059 | 0,027 | 0,092 | 0,091 | 0,026 | 0,04 | 0,013 | <0,01 | 0,028 | 0,026 | <0,01 | 1,7 |
| | | 11.02.2025 | 1 | 0,64 | 0,093 | 0,035 | 0,12 | 0,12 | 0,042 | 0,06 | 0,018 | <0,01 | 0,033 | 0,033 | <0,01 | 2,2 |
| | | 11.03.2025 | 0,69 | 0,61 | 0,062 | 0,027 | 0,092 | 0,097 | 0,029 | 0,039 | 0,012 | <0,01 | 0,027 | 0,025 | <0,01 | 1,7 |
| | | 09.04.2025 | 1,1 | 0,8 | 0,11 | 0,039 | 0,16 | 0,15 | 0,049 | 0,064 | 0,016 | <0,01 | 0,036 | 0,027 | <0,01 | 2,6 |
| | | 08.05.2025 | 0,22 | 0,4 | 0,037 | 0,027 | 0,089 | 0,095 | 0,028 | 0,025 | <0,01 | <0,01 | 0,026 | <0,01 | <0,01 | 0,95 |
| | | 02.06.2025 | 0,69 | 0,66 | 0,078 | 0,036 | 0,12 | 0,12 | 0,04 | 0,053 | 0,012 | <0,01 | 0,034 | 0,029 | <0,01 | 1,9 |
| | | 01.07.2025 | 0,67 | 0,65 | 0,06 | 0,032 | 0,11 | 0,11 | 0,031 | 0,045 | 0,011 | <0,01 | 0,033 | 0,027 | <0,01 | 1,8 |
| | | 31.07.2025 | 0,58 | 0,61 | 0,054 | 0,035 | 0,12 | 0,12 | 0,037 | 0,043 | 0,01 | <0,01 | 0,034 | 0,023 | <0,01 | 1,7 |
| | | 28.08.2025 | 0,57 | 0,6 | 0,062 | 0,032 | 0,11 | 0,11 | 0,037 | 0,041 | <0,01 | <0,01 | 0,027 | 0,023 | <0,01 | 1,6 |
| | | 25.09.2025 | 0,53 | 0,64 | 0,061 | 0,038 | 0,12 | 0,11 | 0,039 | 0,046 | <0,01 | <0,01 | 0,031 | 0,024 | <0,01 | 1,6 |

[redacted]

**Tabelle 2: PFAS Ergebnisse Grundwassermessstellen off-post gesamt / PFAS results off-post wells total**

| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| Offpost 01 | Grundwasser | 16.10.2024 | 4,6 | 7,9 | 0,68 | 0,15 | 0,42 | 0,79 | 0,2 | 0,43 | 0,41 | <0,01 | 0,42 | 0,53 | <0,01 | 17 |
| | | 21.10.2024 | 4,1 | 6,1 | 0,47 | 0,098 | 0,27 | 0,54 | 0,14 | 0,31 | 0,32 | <0,01 | 0,27 | 0,48 | <0,01 | 13 |
| | | 29.10.2024 | 7,6 | 12,4 | 0,94 | 0,2 | 0,58 | 1,06 | 0,26 | 0,68 | 0,72 | <0,01 | 0,56 | 0,98 | <0,01 | 26 |
| | | 04.11.2024 | 2,7 | 5,5 | 0,25 | 0,086 | 0,25 | 0,49 | 0,088 | 0,19 | 0,3 | <0,01 | 0,22 | 0,37 | <0,01 | 10 |
| | | 05.12.2024 | 4,6 | 6 | 0,44 | 0,088 | 0,25 | 0,45 | 0,11 | 0,34 | 0,44 | <0,01 | 0,21 | 0,55 | <0,01 | 13 |
| | | 14.01.2025 | 6 | 6,8 | 0,38 | 0,11 | 0,34 | 0,57 | 0,14 | 0,41 | 0,55 | <0,01 | 0,24 | 0,68 | <0,01 | 16 |
| | | 12.02.2025 | 6,7 | 6,6 | 0,46 | 0,098 | 0,29 | 0,47 | 0,13 | 0,35 | 0,59 | <0,01 | 0,2 | 0,63 | <0,01 | 17 |
| | | 11.03.2025 | 4,2 | 5 | 0,35 | 0,069 | 0,23 | 0,39 | 0,088 | 0,29 | 0,4 | <0,01 | 0,18 | 0,34 | <0,01 | 12 |
| | | 11.04.2025 | 3,64 | 4,02 | 0,239 | 0,071 | 0,27 | 0,404 | 0,088 | 0,191 | 0,294 | <0,01 | 0,204 | 0,37 | <0,01 | 9,79 |
| | | 09.05.2025 | 2,89 | 3,24 | 0,215 | 0,071 | 0,178 | 0,281 | 0,056 | 0,136 | 0,19 | <0,01 | 0,165 | 0,19 | <0,01 | 7,61 |
| | | 02.06.2025 | 6 | 3,9 | 0,306 | 0,086 | 0,176 | 0,417 | 0,097 | 0,196 | 0,364 | <0,01 | 0,224 | 0,453 | <0,01 | 12,2 |
| | | 01.07.2025 | 5,86 | 3,81 | 0,199 | 0,112 | 0,2 | 0,542 | 0,122 | 0,243 | 0,402 | <0,01 | 0,254 | 0,466 | <0,01 | 12,2 |
| | | 30.07.2025 | 4,43 | 3,71 | 0,847 | 0,095 | 0,225 | 0,401 | 0,028 | 0,125 | 0,392 | <0,01 | 0,254 | 0,378 | <0,01 | 10,9 |
| | | 28.08.2025 | 6,5 | 5,27 | 0,35 | 0,148 | 0,281 | 0,658 | 0,129 | 0,326 | 0,485 | <0,01 | 0,325 | 0,531 | <0,01 | 15 |
| | | 26.09.2025 | 7,81 | 7,11 | 0,45 | 0,193 | 0,454 | 0,834 | 0,219 | 0,394 | 0,563 | <0,01 | 0,356 | 0,692 | <0,01 | 19,1 |
| Offpost 02 | Grundwasser | 17.10.2024 | 0,036 | 0,17 | <0,01 | <0,01 | <0,01 | 0,014 | <0,01 | <0,01 | <0,01 | <0,01 | 0,011 | <0,01 | <0,01 | 0,23 |
| | | 21.10.2024 | 0,021 | 0,12 | <0,01 | <0,01 | <0,01 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,15 |
| | | 29.10.2024 | 0,046 | 0,062 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,108 |
| | | 05.11.2024 | 0,022 | 0,033 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,055 |
| | | 05.12.2024 | 0,038 | 0,2 | <0,01 | <0,01 | <0,01 | 0,016 | <0,01 | <0,01 | <0,01 | <0,01 | 0,012 | <0,01 | <0,01 | 0,27 |
| | | 14.01.2025 | 0,012 | 0,081 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,093 |
| | | 12.02.2025 | 0,037 | 0,15 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | 0,011 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,21 |
| | | 11.03.2025 | <0,01 | 0,022 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,022 |
| | | 11.04.2025 | 0,048 | 0,181 | <0,01 | <0,01 | <0,01 | 0,017 | <0,01 | <0,01 | <0,01 | <0,01 | 0,014 | <0,01 | <0,01 | 0,26 |
| | | 09.05.2025 | 0,045 | 0,172 | <0,01 | <0,01 | <0,01 | 0,015 | <0,01 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | <0,01 | 0,245 |
| | | 02.06.2025 | 0,018 | 0,064 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,082 |
| | | 01.07.2025 | 0,012 | 0,025 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | <0,01 | 0,037 |
| | | 30.07.2025 | 0,055 | 0,065 | <0,01 | <0,01 | <0,01 | 0,018 | <0,01 | <0,01 | <0,01 | <0,01 | 0,017 | <0,01 | <0,01 | 0,155 |
| | | 28.08.2025 | 0,055 | 0,198 | <0,01 | <0,01 | <0,01 | 0,015 | <0,01 | 0,012 | <0,01 | <0,01 | 0,014 | 0,01 | <0,01 | 0,304 |
| | | 26.09.2025 | 0,067 | 0,18 | <0,01 | <0,01 | <0,01 | 0,013 | <0,01 | <0,01 | <0,01 | <0,01 | 0,017 | <0,01 | <0,01 | 0,277 |

[redacted]

| Messstelle | Wasserkörper | Probenahme Datum | PFOS [µg/l] | PFHxS [µg/l] | H4PFOS [µg/l] | PFBA [µg/l] | PFPeA [µg/l] | PFHxA [µg/l] | PFHpA [µg/l] | PFOA [µg/l] | PFNA [µg/l] | PFDA [µg/l] | PFBS [µg/l] | PFHpS [µg/l] | PFOSA [µg/l] | Σ PFAS(13) [µg/l] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stufe-1-Wert | - | - | 0,1 | 0,1 | 0,1 | 10 | 3 | 6 | 0,3 | 0,1 | 0,06 | 0,1 | 6 | 0,3 | 0,1 | - |
| Stufe-2-Wert | - | - | 0,4 | 0,4 | 0,4 | 40 | 12 | 24 | 1 | 0,4 | 0,25 | 0,4 | 24 | 1 | 0,4 | - |
| Offpost 03 | Grundwasser | 16.10.2024 | 2,8 | 2 | 0,5 | 0,067 | 0,2 | 0,25 | 0,095 | 0,18 | 0,099 | <0,01 | 0,095 | 0,16 | <0,01 | 6,4 |
| | | 21.10.2024 | 3,7 | 2,9 | 0,59 | 0,088 | 0,28 | 0,38 | 0,12 | 0,2 | 0,14 | <0,01 | 0,15 | 0,24 | <0,01 | 8,8 |
| | | 05.11.2024 | 3,2 | 3,2 | 1,1 | 0,09 | 0,29 | 0,39 | 0,087 | 0,13 | 0,14 | <0,01 | 0,16 | 0,23 | <0,01 | 9 |
| | | 05.12.2024 | 1,9 | 1 | 0,34 | 0,044 | 0,15 | 0,14 | 0,059 | 0,093 | 0,042 | <0,01 | 0,044 | 0,09 | <0,01 | 3,9 |
| | | 14.01.2025 | 2,5 | 0,97 | 0,38 | 0,049 | 0,16 | 0,15 | 0,066 | 0,093 | 0,04 | <0,01 | 0,04 | 0,09 | <0,01 | 4,5 |
| | | 12.02.2025 | 2 | 1,1 | 0,46 | 0,055 | 0,18 | 0,17 | 0,081 | 0,12 | 0,048 | <0,01 | 0,047 | 0,12 | <0,01 | 4,4 |
| | | 11.03.2025 | 2,4 | 2,1 | 0,55 | 0,083 | 0,24 | 0,31 | 0,093 | 0,16 | 0,08 | <0,01 | 0,13 | 0,12 | <0,01 | 6,3 |
| | | 11.04.2025 | 4,07 | 5,07 | 0,499 | 0,167 | 0,608 | 0,931 | 0,179 | 0,26 | 0,185 | <0,01 | 0,503 | 0,326 | <0,01 | 12,8 |
| | | 09.05.2025 | 4,39 | 6 | 0,681 | 0,226 | 0,562 | 0,938 | 0,187 | 0,419 | 0,248 | <0,01 | 0,627 | 0,449 | <0,01 | 14,7 |
| | | 02.06.2025 | 3,16 | 0,908 | 0,319 | 0,067 | 0,148 | 0,188 | 0,088 | 0,108 | 0,041 | <0,01 | 0,05 | 0,094 | <0,01 | 5,12 |
| | | 01.07.2025 | 2,23 | 1,6 | 0,732 | 0,126 | 0,291 | 0,285 | 0,163 | 0,188 | 0,057 | <0,01 | 0,084 | 0,285 | <0,01 | 6,04 |
| | | 30.07.2025 | 4,45 | 4,88 | 1,8 | 0,209 | 0,486 | 0,898 | 0,022 | 0,166 | 0,208 | <0,01 | 0,531 | 0,285 | <0,01 | 13,9 |
| | | 28.08.2025 | 4,44 | 5,94 | 0,552 | 0,267 | 0,519 | 1,28 | 0,215 | 0,39 | 0,23 | <0,01 | 0,736 | 0,34 | <0,01 | 14,9 |
| | | 26.09.2025 | 4,23 | 6,53 | 0,495 | 0,272 | 0,537 | 1,23 | 0,28 | 0,372 | 0,246 | <0,01 | 0,647 | 0,334 | <0,01 | 15,2 |

[redacted]

**Tabelle 1: Ergebnisse PFAS TS3 / Table 1: Results PFAS TS3**

| Parameter | Einleitgrenzwert [1] / Discharge limit [1] [µg/l] |
|---|---|
| PFOS | 0,02 |
| ∑ PFAS(13) | 0,2 |

[1] Einleitgrenzwerte entsprechend Wasserrechtlicher Genehmigung, Bescheid Stadt Ansbach vom 18.07.2024

[1] Discharge limit according to approval city of Ansbach from 18.07.2024

| | | Analysenergebnisse / Results [µg/l] | | | |
|---|---|---|---|---|---|
| Probenahme / Sampling | Parameter | TS3 - ROH1 | TS3 - MID | TS3 - REIN | TS3 - REIN - QA/QC |
| 17.10.2024 | PFBA | 0,89 | <0,01 | <0,01 | n.a. |
| | PFHxS | 17 | <0,01 | <0,01 | n.a. |
| | PFOS | 17 | <0,01 | <0,01 | n.a. |
| | PFAS | 46 | n.b. | n.b. | n.a. |
| 22.10.2024 | PFBA | 0,34 | <0,01 | <0,01 | <0,01 |
| | PFHxS | 12 | <0,01 | <0,01 | <0,01 |
| | PFOS | 13 | <0,01 | <0,01 | <0,01 |
| | PFAS | 34 | n.b. | n.b. | n.b. |
| 29.10.2024 | PFBA | 0,3 | 0,078 | <0,01 | <0,01 |
| | PFHxS | 9,4 | <0,01 | <0,01 | <0,01 |
| | PFOS | 10 | <0,01 | <0,01 | <0,01 |
| | PFAS | 27 | 0,078 | n.b. | n.b. |
| 05.11.2024 | PFBA | 0,23 | 0,15 | <0,01 | <0,01 |
| | PFHxS | 8,5 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,6 | <0,01 | <0,01 | <0,01 |
| | PFAS | 22 | 0,15 | n.b. | n.b. |
| 13.11.2024 | PFBA | 0,26 | 0,27 | <0,01 | <0,01 |
| | PFHxS | 8 | <0,01 | <0,01 | <0,01 |
| | PFOS | 5,6 | <0,01 | <0,01 | <0,01 |
| | PFAS | 14 | 0,3 | n.n. | n.n. |
| 20.11.2024 | PFBA | 0,26 | 0,31 | <0,01 | <0,01 |
| | PFHxS | 8,2 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,8 | <0,01 | <0,01 | <0,01 |
| | PFAS | 23 | 0,37 | n.n. | n.n. |
| 29.11.2024 | PFBA | 0,24 | 0,27 | <0,01 | <0,01 |
| | PFHxS | 8,1 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,4 | <0,01 | <0,01 | <0,01 |
| | PFAS | 22 | 0,4 | n.n. | n.n. |
| 03.12.2024 | PFBA | 0,25 | 0,3 | 0,018 | 0,019 |
| | PFHxS | 8,6 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,8 | <0,01 | <0,01 | <0,01 |
| | PFAS | 23 | 0,49 | 0,018 | 0,019 |

[redacted]

| | | Analysenergebnisse / Results [µg/l] | | | |
|---|---|---|---|---|---|
| Probenahme / Sampling | Parameter | TS3 - ROH1 | TS3 - MID | TS3 - REIN | TS3 - REIN - QA/QC |
| 13.12.2024 | PFBA | 0,25 | 0,26 | 0,065 | 0,064 |
| | PFHxS | 9,1 | <0,01 | <0,01 | <0,01 |
| | PFOS | 8,6 | <0,01 | <0,01 | <0,01 |
| | PFAS | 25 | 0,53 | 0,065 | 0,064 |
| 17.12.2024 | PFBA | 0,26 | 0,27 | 0,088 | 0,088 |
| | PFHxS | 9,3 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,8 | <0,01 | <0,01 | <0,01 |
| | PFAS | 24 | 0,61 | 0,088 | 0,088 |
| 23.12.2024 | PFBA | 0,25 | 0,25 | 0,12 | n.a. |
| | PFHxS | 9 | <0,01 | <0,01 | n.a. |
| | PFOS | 8 | <0,01 | <0,01 | n.a. |
| | PFAS | 24 | 0,65 | 0,12 | n.a. |
| 02.01.2025 | PFBA | 0,26 | 0,25 | 0,18 | 0,18 |
| | PFHxS | 9,4 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,9 | <0,01 | <0,01 | <0,01 |
| | PFAS | 24 | 0,78 | 0,18 | 0,18 |
| 13.01.2025 | PFBA | 0,37 | 0,34 | 0,34 | 0,34 |
| | PFHxS | 10 | <0,01 | <0,01 | <0,01 |
| | PFOS | 15 | <0,01 | <0,01 | <0,01 |
| | PFAS | 34 | 1,2 | 0,34 | 0,34 |
| 27.01.2025 | PFBA | 0,25 | <0,01 | <0,01 | <0,01 |
| | PFHxS | 8,4 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7 | <0,01 | <0,01 | <0,01 |
| | PFAS | 22 | n.b. | n.b. | n.b. |
| 10.02.2025 | PFBA | 0,28 | 0,092 | <0,02 | <0,02 |
| | PFHxS | 8,4 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,2 | <0,01 | <0,01 | <0,01 |
| | PFAS | 23 | 0,092 | n.b. | n.b. |
| 25.02.2025 | PFBA | 0,25 | 0,2 | <0,01 | <0,01 |
| | PFHxS | 8,1 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,5 | <0,01 | <0,01 | <0,01 |
| | PFAS | 22 | 0,25 | n.b. | n.b. |
| 10.03.2025 | PFBA | 0,29 | 0,27 | <0,01 | <0,01 |
| | PFHxS | 8,4 | <0,01 | <0,01 | <0,01 |
| | PFOS | 7,5 | <0,01 | <0,01 | <0,01 |
| | PFAS | 23 | 0,41 | n.b. | n.b. |
| 24.03.2025 | PFBA | 0,14 | 0,28 | 0,025 | <0,01 |
| | PFHxS | 7,3 | <0,01 | <0,01 | <0,01 |
| | PFOS | 6,1 | <0,01 | <0,01 | <0,01 |
| | PFAS | 20 | 0,58 | 0,025 | n.n. |
| 10.04.2025 | PFBA | 0,27 | 0,28 | 0,083 | 0,083 |
| | PFHxS | 7,9 | <0,01 | <0,01 | <0,01 |
| | PFOS | 6,5 | <0,01 | <0,01 | <0,01 |
| | PFAS | 21 | 0,73 | 0,083 | 0,083 |
| 08.05.2025 | PFBA | 0,22 | <0,01 | <0,01 | <0,01 |
| | PFHxS | 7,2 | <0,01 | <0,01 | <0,01 |
| | PFOS | 5,9 | 0,023 | <0,01 | <0,01 |
| | PFAS | 19 | 0,023 | n.b. | n.b. |

[redacted]

| | | Analysenergebnisse / Results [µg/l] | | | |
|---|---|---|---|---|---|
| **Probenahme / Sampling** | **Parameter** | **TS3 - ROH1** | **TS3 - MID** | **TS3 - REIN** | **TS3 - REIN - QA/QC** |
| 02.06.2025 | PFBA | 0,25 | <0,01 | <0,01 | <0,01 |
| | PFHxS | 7,6 | <0,01 | <0,01 | <0,01 |
| | PFOS | 5,9 | 0,014 | <0,01 | <0,01 |
| | PFAS | 19 | 0,014 | n.b. | n.b. |
| 01.07.2025 | PFBA | 0,22 | <0,01 | <0,01 | <0,01 |
| | PFHxS | 6,9 | <0,01 | <0,01 | <0,01 |
| | PFOS | 4,4 | <0,01 | <0,01 | <0,01 |
| | PFAS | 16 | n.b. | n.b. | n.b. |
| 31.07.2025 | PFBA | 0,21 | 0,047 | <0,01 | <0,01 |
| | PFHxS | 6,2 | <0,01 | <0,01 | <0,01 |
| | PFOS | 4,8 | <0,01 | <0,01 | <0,01 |
| | PFAS | 16 | 0,047 | n.b. | n.b. |
| 28.08.2025 | PFBA | 0,19 | 0,11 | <0,01 | <0,01 |
| | PFHxS | 6,6 | <0,01 | <0,01 | <0,01 |
| | PFOS | 4,2 | <0,01 | <0,01 | <0,01 |
| | PFAS | 15 | 0,14 | 0,011 | n.b. |
| 25.09.2025 | PFBA | 0,26 | 0,18 | <0,01 | <0,01 |
| | PFHxS | 6 | <0,01 | <0,01 | <0,01 |
| | PFOS | 15 | <0,01 | <0,01 | <0,01 |
| | PFAS | 26 | 0,21 | n.n. | n.n. |

n.b.: nicht berechenbar (alle Einzelparameter unterhalb der Nachweisgrenze)

n.a.: nicht analysiert

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**Tabelle 2: Analysenergebnisse weitere Parameter Rohwasser TS3 / Table 2: Results additional parameter raw water TS3**

| TS3 - ROH | Parameter Rohwasser | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Probenahme | Trockenrückstand [mg/l] | Säurekapazität Ks4,3 [mmol/l] | Chlorid [mg/l] | Sulfat [mg/l] | Nitrat [mg/l] | TOC [mg/l] | DOC [mg/l] | Gesamtgehalt gelöster Feststoffe (TDS) [mg/l] |
| 17.10.2024 | 590 | 5,5 | 86 | 31 | 21 | 1,4 | 1,4 | 573 |
| 22.10.2024 | 522 | 5,5 | 76 | 30 | 21 | 1,3 | 1,3 | 496 |
| 29.10.2024 | 463 | 5,5 | 73 | 29 | 21 | 1,2 | 1,2 | 482 |
| 05.11.2024 | 489 | 5,5 | 73 | 29 | 22 | 1,2 | 1,2 | 418 |
| 13.11.2024 | 468 | 5,6 | 70 | 29 | 22 | 1,4 | 1,2 | 424 |
| 20.11.2024 | 470 | 5,6 | 67 | 29 | 23 | 1,5 | 1,4 | 458 |
| 29.11.2024 | 458 | 5,5 | 68 | 28 | 23 | 1,4 | 1,1 | 413 |
| 03.12.2024 | 469 | 5,5 | 66 | 28 | 23 | 1,4 | 1,0 | 461 |
| 13.12.2024 | 508 | 5,6 | 65 | 28 | 24 | 1,5 | 1,2 | 489 |
| 17.12.2024 | 445 | 5,6 | 66 | 27 | 23 | 1,2 | 1,1 | 427 |
| 23.12.2024 | 447 | 5,6 | 63 | 28 | 24 | 1,2 | 1,1 | 428 |
| 02.01.2025 | 445 | 5,6 | 64 | 27 | 23 | 1,2 | 1,1 | 378 |
| 13.01.2025 | 447 | 5,7 | 59 | 27 | 27 | 1,4 | 1,3 | 437 |
| 27.01.2025 | 484 | 5,6 | 65 | 27 | 24 | 1,2 | 1,1 | 412 |
| 10.02.2025 | 509 | 5,7 | 60 | 26 | 24 | 1,2 | 1,1 | 468 |
| 25.02.2025 | 424 | 5,7 | 64 | 27 | 24 | 1,7 | 1,4 | 419 |
| 10.03.2025 | 453 | 5,7 | 66 | 27 | 24 | 1,5 | 1,5 | 422 |
| 24.03.2025 | 478 | 5,4 | 67 | 27 | 24 | 1,3 | 1,3 | 383 |
| 10.04.2025 | 462 | 5,7 | 68 | 28 | 24 | 1,3 | 1,2 | 453 |
| 08.05.2025 | 473 | 5,7 | 69 | 29 | 26 | 1,3 | 1,4 | 424 |
| 02.06.2025 | 516 | 5,7 | 65 | 27 | 25 | 1,2 | 1,3 | 411 |
| 01.07.2025 | 375 | 5,8 | 64 | 28 | 25 | 1,9 | 1,9 | 352 |
| 31.07.2025 | 504 | 5,7 | 60 | 27 | 25 | 2 | 0,7 | 469 |
| 28.08.2025 | 420 | 5,7 | 56 | 24 | 24 | 1,1 | 1,2 | 399 |
| 25.09.2025 | 447 | 5,9 | 48 | 31 | 29 | 2,7 | 2,6 | 427 |

n.a.: nicht analysiert / not analysed

[redacted]

**Tabelle 3: Feldparameter TS3 / Table 3: Field parameter TS3**

| | | Feldparameter / Field parameter | | | | | |
|---|---|---|---|---|---|---|---|
| Probenahme / sampling | Probenahmepunkt / sampling port | pH | Leitfähigkeit / conductivity [µS/cm] | gelöster Sauerstoff / dissolved oxigen [mg/l] | Redox [mV] | Redox corr. [mV] | Temperatur [°C] |
| 17.10.2024 | TS3 - ROH | 7,10 | 349 | 3,55 | -32 | 182 | 13,0 |
| | TS3 - MID | 7,01 | 352 | 3,20 | -25 | 189 | 13,1 |
| | TS3 - REIN | 6,99 | 353 | 3,05 | -28 | 186 | 13,4 |
| 22.10.2024 | TS3 - ROH | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - MID | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - REIN | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 29.10.2024 | TS3 - ROH | 6,69 | 345 | 4,35 | -34 | 180 | 12,8 |
| | TS3 - MID | 6,71 | 342 | 4,55 | -36 | 178 | 12,8 |
| | TS3 - REIN | 6,75 | 344 | 4,35 | -35 | 179 | 13,8 |
| 05.11.2024 | TS3 - ROH | 7,05 | 332 | 5,10 | -21 | 193 | 11,3 |
| | TS3 - MID | 7,01 | 328 | 4,95 | -24 | 190 | 11,7 |
| | TS3 - REIN | 7,00 | 331 | 4,85 | -25 | 189 | 11,8 |
| 13.11.2024 | TS3 - ROH | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - MID | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - REIN | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 20.11.2024 | TS3 - ROH | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - MID | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| | TS3 - REIN | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |

[redacted]

| Probenahme / sampling | Probenahmepunkt / sampling port | pH | Leitfähigkeit / conductivity [µS/cm] | gelöster Sauerstoff / dissolved oxigen [mg/l] | Redox [mV] | Redox corr. [mV] | Temperatur [°C] |
|---|---|---|---|---|---|---|---|
| 29.11.2024 | TS3 - ROH | 6,72 | 297 | 0,2 | 15 | 229 | 11,5 |
| | TS3 - MID | 6,78 | 301 | 0,2 | 12 | 226 | 11,6 |
| | TS3 - REIN | 7,13 | 315 | 0,2 | 0 | 214 | 13,1 |
| 03.12.2024 | TS3 - ROH | 7,10 | 341 | 0,2 | 18 | 232 | 11,1 |
| | TS3 - MID | 7,14 | 354 | 0,2 | 19 | 233 | 11,0 |
| | TS3 - REIN | 7,17 | 437 | 0,2 | 14 | 228 | 11,1 |
| 13.12.2024 | TS3 - ROH | 6,96 | 421 | 14,1 | 8 | 222 | 10,6 |
| | TS3 - MID | 6,94 | 377 | 9,0 | 1 | 215 | 10,7 |
| | TS3 - REIN | 6,88 | 354 | 7,5 | -10 | 204 | 10,4 |
| 17.12.2024 | TS3 - ROH | 6,61 | 368 | 5,5 | 30 | 244 | 10,8 |
| | TS3 - MID | 6,50 | 330 | 5,2 | 30 | 244 | 10,9 |
| | TS3 - REIN | 6,50 | 311 | 4,8 | 28 | 242 | 10,7 |
| 23.12.2024 | TS3 - ROH | 7,01 | 312 | 4,75 | -18 | 196 | 10,0 |
| | TS3 - MID | 6,98 | 306 | 4,71 | -14 | 200 | 10,1 |
| | TS3 - REIN | 7,02 | 304 | 4,64 | -14 | 200 | 10,2 |
| 02.01.2025 | TS3 - ROH | 6,40 | 287 | 3,7 | 77 | 291 | 10,7 |
| | TS3 - MID | 6,54 | 295 | 3,8 | 73 | 287 | 10,7 |
| | TS3 - REIN | 6,94 | 394 | 3,5 | 46 | 260 | 10,7 |
| 13.01.2025 | TS3 - ROH | 7,16 | 333 | 2,8 | 36 | 250 | 9,5 |
| | TS3 - MID | 7,08 | 316 | 2,0 | 44 | 258 | 9,6 |
| | TS3 - REIN | 6,82 | 280 | 1,7 | 53 | 267 | 9,5 |

[redacted]

| Probenahme / sampling | Probenahmepunkt / sampling port | pH | Leitfähigkeit / conductivity [µS/cm] | gelöster Sauerstoff / dissolved oxigen [mg/l] | Redox [mV] | Redox corr. [mV] | Temperatur [°C] |
|---|---|---|---|---|---|---|---|
| 27.01.2025 | TS3 - ROH | 6,90 | 316 | n.a. | 48 | 262 | 10,1 |
| | TS3 - MID | 6,63 | 294 | n.a. | 57 | 271 | 10,1 |
| | TS3 - REIN | 6,42 | 282 | n.a. | 61 | 275 | 10,1 |
| 10.02.2025 | TS3 - ROH | 6,90 | 797 | 8,7 | 31 | 245 | 9,7 |
| | TS3 - MID | 7,00 | 800 | 8,8 | 56 | 270 | 9,8 |
| | TS3 - REIN | 7,00 | 807 | 8,6 | 42 | 256 | 10,3 |
| 25.02.2025 | TS3 - ROH | 7,00 | 801 | 8,6 | -39 | 175 | 9,6 |
| | TS3 - MID | 7,00 | 806 | 8,5 | 2 | 216 | 9,7 |
| | TS3 - REIN | 7,00 | 802 | 8,5 | -9 | 205 | 10,4 |
| 10.03.2025 | TS3 - ROH | 7,31 | 288 | n.a. | 32 | 246 | 10,3 |
| | TS3 - MID | 7,04 | 269 | n.a. | 30 | 244 | 10,2 |
| | TS3 - REIN | 6,63 | 256 | n.a. | 31 | 245 | 10,5 |
| 24.03.2025 | TS3 - ROH | 7 | 817 | 8,1 | -51 | 163 | 10,1 |
| | TS3 - MID | 7 | 816 | 7,8 | 33 | 247 | 10,1 |
| | TS3 - REIN | 7 | 815 | 7,8 | 21 | 235 | 10,1 |
| 10.04.2025 | TS3 - ROH | 6,35 | 668 | 6,7 | 31 | 245 | 10,9 |
| | TS3 - MID | 6,43 | 682 | 6,8 | 25 | 239 | 10,9 |
| | TS3 - REIN | 6,66 | 925 | 7,9 | 19 | 233 | 11,4 |

[redacted]

| Probenahme / sampling | Probenahmepunkt / sampling port | pH | Leitfähigkeit / conductivity [µS/cm] | gelöster Sauerstoff / dissolved oxigen [mg/l] | Redox [mV] | Redox corr. [mV] | Temperatur [°C] |
|---|---|---|---|---|---|---|---|
| 08.05.2025 | TS3 - ROH | 6,68 | 512 | 6,5 | 22 | 236 | 13,4 |
| | TS3 - MID | 6,63 | 400 | 4,5 | 13 | 227 | 12,5 |
| | TS3 - REIN | 6,44 | 339 | 3,7 | 25 | 239 | 12,2 |
| 02.06.2025 | TS3 - ROH | 6,73 | 361 | 6,5 | 24 | 238 | 14,9 |
| | TS3 - MID | 6,66 | 316 | 4,7 | 18 | 232 | 13,7 |
| | TS3 - REIN | 6,45 | 300 | 4,3 | 26 | 240 | 13,4 |
| 01.07.2025 | TS3 - ROH | 6,69 | 329 | 6,3 | 7 | 221 | 18,5 |
| | TS3 - MID | 6,68 | 302 | 4,9 | 9 | 223 | 16,1 |
| | TS3 - REIN | 6,35 | 292 | 4,5 | 25 | 239 | 15,2 |
| 31.07.2025 | TS3 - ROH | 6,77 | 298 | 6 | -5 | 209 | 15,3 |
| | TS3 - MID | 6,72 | 285 | 5 | -9 | 205 | 14,7 |
| | TS3 - REIN | 6,39 | 271 | 4,4 | 12 | 226 | 14,3 |
| 28.08.2025 | TS3 - ROH | 6,80 | 1010 | 5,4 | -10 | 204 | 15,8 |
| | TS3 - MID | 6,70 | 864 | 4,5 | -7 | 207 | 15 |
| | TS3 - REIN | 6,30 | 830 | 4,2 | 8 | 222 | 14,8 |
| 25.09.2025 | TS3 - ROH | 6,40 | 525 | 5,4 | 8 | 222 | 14,3 |
| | TS3 - MID | 6,35 | 432 | 4,2 | 7 | 221 | 14,1 |
| | TS3 - REIN | 6,37 | 393 | 4,4 | 8 | 222 | 13,9 |

n.a.: nicht analysiert / not analysed

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**Tabelle 1: QA/QC Ergebnisse Grundwasser / Table 1: QA/QC results groundwater**

| Probe | Probenahmedatum | Ananlysenummer | PFAS | RPD PFAS |
|---|---|---|---|---|
| **GWM 81** | **17.10.2024** | AP2470778 | 0,61 | 4,80 % |
| **GWM 81 - QA/QC** | **17.10.2024** | AP2470779 | 0,64 | |
| **GWM 82A** | **17.10.2024** | AP2470780 | 9,9 | 1,01 % |
| **GWM 82A - QA/QC** | **17.10.2024** | AP2470781 | 10 | |
| **GWM 84B** | **16.10.2024** | AP2470783 | 1,2 | 157,14 % |
| **GWM 84B-QA/QC** | **16.10.2024** | AP2470784 | 10 | |
| **GWM 71** | **21.10.2024** | AP2472704 | 1,8 | 10,53 % |
| **GWM 71-QA/QC** | **21.10.2024** | AP2472705 | 2 | |
| **GWM 80A** | **22.10.2024** | AP2472708 | 85 | 1,17 % |
| **GWM 80A-QA/QC** | **22.10.2024** | AP2472709 | 86 | |
| **GWM 84B** | **21.10.2024** | AP2472713 | 1,3 | 8,00 % |
| **GWM 84B-QA/QC** | **21.10.2024** | AP2472714 | 1,2 | |
| **GWM 39** | **28.10.2024** | AP2473973 | 0,16 | 11,76 % |
| **GWM 39 - QA/QC** | **28.10.2024** | AP2473974 | 0,18 | |
| **GWM 82A** | **28.10.2024** | AP2473982 | 9,8 | 1,03 % |
| **GWM 82A - QA/QC** | **28.10.2024** | AP2473983 | 9,7 | |
| **GWM 85A** | **29.10.2024** | AP2473986 | 40 | 5,13 % |
| **GWM 85A - QA/QC** | **29.10.2024** | AP2473987 | 38 | |
| **GWM 39** | **04.11.2024** | AP2475920 | 0,1 | 9,52 % |
| **GWM 39 - QA/QC** | **04.11.2024** | AP2475921 | 0,11 | |
| **GWM 71** | **04.11.2024** | AP2475924 | 1,6 | 6,45 % |
| **GWM 71 - QA/QC** | **04.11.2024** | AP2475925 | 1,5 | |
| **GWM 78B** | **04.11.2024** | AP2475927 | 1,8 | 5,71 % |
| **GWM 78B - QA/QC** | **04.11.2024** | AP2475928 | 1,7 | |
| **GWM 71** | **03.12.2024** | AP2483356 | 1,5 | 0,00 % |
| **GWM 71 - QA/QC** | **03.12.2024** | AP2483357 | 1,5 | |
| **GWM 78B** | **03.12.2024** | AP2483359 | 1,9 | 5,13 % |
| **GWM 78B - QA/QC** | **03.12.2024** | AP2483360 | 2 | |
| **GWM 84A** | **03.12.2024** | AP2483365 | 9,2 | 2,20 % |
| **GWM 84A - QA/QC** | **03.12.2024** | AP2483366 | 9 | |
| **GWM 39** | **13.01.2025** | AP2501815 | 0,14 | 24,00 % |
| **GWM 39 - QA/QC** | **13.01.2025** | AP2501834 | 0,11 | |
| **GWM 71** | **13.01.2025** | AP2501818 | 1,3 | 26,09 % |
| **GWM 71 - QA/QC** | **13.01.2025** | AP2501836 | 1 | |
| **GWM 40** | **14.01.2025** | AP2501816 | 11 | 0,00 % |
| **GWM 40 - QA/QC** | **14.01.2025** | AP2501835 | 11 | |

Appendix C.4

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| Probe | Probenahmedatum | Ananlysenummer | PFAS | RPD PFAS |
|---|---|---|---|---|
| **GWM 39** | **11.02.2025** | AP2506598 | 0,13 | 16,67 % |
| **GWM 39 - QA/QC** | **11.02.2025** | AP2506614 | 0,11 | |
| **GWM 71** | **11.02.2025** | AP2506601 | 1 | 9,52 % |
| **GWM 71 - QA/QC** | **11.02.2025** | AP2506616 | 1,1 | |
| **GWM 40** | **12.02.2025** | AP2506599 | 10 | 9,52 % |
| **GWM 40 - QA/QC** | **12.02.2025** | AP2506615 | 11 | |
| **GWM 39** | **10.03.2025** | AP2513275 | 0,12 | 8,00 % |
| **GWM 39 - QA/QC** | **10.03.2025** | AP2513293 | 0,13 | |
| **GWM 71** | **10.03.2025** | AP2513278 | 1,1 | 0,00 % |
| **GWM 71 - QA/QC** | **10.03.2025** | AP2513295 | 1,1 | |
| **GWM 40** | **11.03.2025** | AP2513276 | 8,5 | 2,38 % |
| **GWM 40 - QA/QC** | **11.03.2025** | AP2513294 | 8,3 | |
| **GWM 39** | **09.04.2025** | AP2519974 | 0,13 | 0,00 % |
| **GWM 39 - QA/QC** | **09.04.2025** | AP2519991 | 0,13 | |
| **GWM 71** | **09.04.2025** | AP2519978 | 1,1 | 0,00 % |
| **GWM 71 - QA/QC** | **09.04.2025** | AP2519993 | 1,1 | |
| **GWM 40** | **10.04.2025** | AP2519975 | 8,6 | 3,55 % |
| **GWM 40 - QA/QC** | **10.04.2025** | AP2519992 | 8,3 | |
| **GWM 39** | **08.05.2025** | AP2526090 | 0,11 | 8,70 % |
| **GWM 39 - QA/QC** | **08.05.2025** | AP2526110 | 0,12 | |
| **GWM 71** | **08.05.2025** | AP2526091 | 8,4 | 1,20 % |
| **GWM 71 - QA/QC** | **08.05.2025** | AP2526111 | 8,3 | |
| **GWM 40** | **08.05.2025** | AP2526092 | 20 | 183,14 % |
| **GWM 40 - QA/QC** | **08.05.2025** | AP2526112 | 0,88 | |
| **GWM 39** | **02.06.2025** | AP2532028 | 0,13 | 8,00 % |
| **GWM 39 - QA/QC** | **02.06.2025** | AP2532045 | 0,12 | |
| **GWM 71** | **02.06.2025** | AP2532031 | 0,99 | 3,08 % |
| **GWM 71 - QA/QC** | **02.06.2025** | AP2532047 | 0,96 | |
| **GWM 40** | **02.06.2025** | AP2532029 | 9 | 1,12 % |
| **GWM 40 - QA/QC** | **02.06.2025** | AP2532046 | 8,9 | |
| **GWM 39** | **01.07.2025** | AP2539300 | 0,14 | 0,00 % |
| **GWM 39 - QA/QC** | **01.07.2025** | AP2539313 | 0,14 | |
| **GWM 71** | **01.07.2025** | AP2539303 | 0,82 | 0,00 % |
| **GWM 71 - QA/QC** | **01.07.2025** | AP2539316 | 0,82 | |
| **GWM 40** | **01.07.2025** | AP2539301 | 8,8 | 3,47 % |
| **GWM 40 - QA/QC** | **01.07.2025** | AP2539314 | 8,5 | |

Appendix C.4

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| Probe | Probenahmedatum | Ananlysenummer | PFAS | RPD PFAS |
|---|---|---|---|---|
| **GWM 39** | **31.07.2025** | AP2546191 | 0,13 | 0,00 % |
| **GWM 39 - QA/QC** | **31.07.2025** | AP2546223 | 0,13 | |
| **GWM 71** | **31.07.2025** | AP2546194 | 0,96 | 3,17 % |
| **GWM 71 - QA/QC** | **31.07.2025** | AP2546225 | 0,93 | |
| **GWM 40** | **31.07.2025** | AP2546192 | 7,6 | 4,03 % |
| **GWM 40 - QA/QC** | **31.07.2025** | AP2546224 | 7,3 | |
| **GWM 39** | **28.08.2025** | AP2552384 | 0,12 | 20,18 % |
| **GWM 39 - QA/QC** | **28.08.2025** | AP2552400 | 0,098 | |
| **GWM 71** | **28.08.2025** | AP2552387 | 0,94 | 3,14 % |
| **GWM 71 - QA/QC** | **28.08.2025** | AP2552402 | 0,97 | |
| **GWM 40** | **28.08.2025** | AP2552385 | 7,1 | 5,48 % |
| **GWM 40 - QA/QC** | **28.08.2025** | AP2552401 | 7,5 | |
| **GWM 39** | **25.09.2025** | AP2558589 | 0,13 | 0,00 % |
| **GWM 39 - QA/QC** | **25.09.2025** | AP2558606 | 0,13 | |
| **GWM 71** | **25.09.2025** | AP2558592 | 0,87 | 1,14 % |
| **GWM 71 - QA/QC** | **25.09.2025** | AP2558608 | 0,88 | |
| **GWM 40** | **25.09.2025** | AP2558590 | 6,5 | 4,51 % |
| **GWM 40 - QA/QC** | **25.09.2025** | AP2558607 | 6,8 | |

[redacted]

| GWM37 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 27.08.2015 | 82,82 | |
| 24.09.2015 | 2,35 | 12,65 |
| 01.09.2017 | 4,995 | 12,7 |
| 20.11.2018 | 34,8 | 11,895 |
| 09.06.2022 | 29,37 | |
| 27.03.2024 | 67,57 | 9,986 |
| 16.10.2024 | 55 | 21,15 |
| 28.10.2024 | 60 | 23,58 |
| 04.11.2024 | 32 | 23,25 |
| 03.12.2024 | 24 | 23,76 |
| 13.01.2025 | 18 | 17,13 |
| 12.02.2025 | 18 | 24,16 |
| 10.03.2025 | 17 | 23,93 |
| 10.04.2025 | 20 | 23,73 |
| 08.05.2025 | 18 | 23,29 |
| 02.06.2025 | 16 | 23,99 |
| 01.07.2025 | 13 | 24,76 |
| 31.07.2025 | 10 | 23,32 |
| 28.08.2025 | 8,5 | 23,86 |
| 25.09.2025 | 20 | 24,04 |

| GWM40 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 03.09.2015 | 2,34 | |
| 24.09.2015 | 15,54 | 6,29 |
| 01.09.2017 | 21,62 | 6,55 |
| 21.11.2018 | 18,6 | 6,505 |
| 29.05.2019 | 19,7 | 6,34 |
| 10.06.2022 | 59,21 | |
| 26.03.2024 | 12,82 | 7,51 |
| 17.10.2024 | 11 | 8,01 |
| 29.10.2024 | 24 | 8,06 |
| 05.11.2024 | 6,7 | 8,1 |
| 05.12.2024 | 11 | 8,4 |
| 14.01.2025 | 11 | 8,23 |
| 12.02.2025 | 10 | 8,16 |
| 11.03.2025 | 8,5 | 9,01 |
| 10.04.2025 | 8,6 | 7,99 |
| 08.05.2025 | 8,4 | 8,01 |
| 02.06.2025 | 9 | 8,08 |
| 01.07.2025 | 8,8 | 8,14 |
| 31.07.2025 | 7,6 | 8,22 |
| 28.08.2025 | 7,1 | 8,3 |
| 25.09.2025 | 6,5 | 8,33 |

| GWM70 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 31.08.2017 | 14,33 | 11,58 |
| 21.11.2018 | 33,4 | 6,905 |
| 29.05.2019 | 28,9 | 6,69 |
| 10.06.2022 | 45,88 | |
| 26.03.2024 | 31,11 | 9,42 |
| 16.10.2024 | 34 | 14,43 |
| 28.10.2024 | 48 | 15,7 |
| 04.11.2024 | 21 | 15,85 |
| 03.12.2024 | 21 | 16,24 |
| 13.01.2025 | 22 | 17,01 |
| 12.02.2025 | 21 | 16,74 |
| 10.03.2025 | 22 | 16,45 |
| 10.04.2025 | 22 | 16,63 |
| 08.05.2025 | 20 | 16,34 |
| 02.06.2025 | 19 | 16,86 |
| 01.07.2025 | 18 | 17,08 |
| 31.07.2025 | 16 | 17,4 |
| 28.08.2025 | 16 | 17,54 |
| 25.09.2025 | 15 | 17,54 |

| GWM78A | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 27.03.2024 | 86,1 | 9,07 |
| 28.10.2024 | 118 | 12,45 |
| 04.11.2024 | 54 | 12,45 |
| 03.12.2024 | 46 | 12,5 |
| 13.01.2025 | 72 | 12,52 |
| 10.03.2025 | 65 | 12,43 |
| 10.04.2025 | 78 | 12,52 |
| 08.05.2025 | 79 | 12,4 |
| 02.06.2025 | 59 | 12,4 |
| 01.07.2025 | 58 | 12,44 |
| 31.07.2025 | 63 | 12,49 |
| 28.08.2025 | 52 | 12,51 |
| 25.09.2025 | 170 | 12,46 |

| GWM80 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 31.03.2021 | 20 | |
| 23.04.2021 | 24,75 | |
| 20.05.2021 | 2,8 | |
| 09.06.2022 | 14,3 | |
| 27.03.2024 | 19,28 | 9,4 |
| 17.10.2024 | 30 | 10,46 |
| 29.10.2024 | 240 | 11,92 |
| 05.11.2024 | 140 | 12,21 |
| 05.12.2024 | 200 | 12,81 |
| 14.01.2025 | 230 | 13,21 |
| 11.02.2025 | 260 | 13,28 |
| 11.03.2025 | 240 | 13,24 |
| 09.04.2025 | 240 | 13,25 |
| 08.05.2025 | 220 | 13,3 |
| 02.06.2025 | 200 | 13,35 |
| 01.07.2025 | 220 | 13,44 |
| 31.07.2025 | 220 | 13,56 |
| 28.08.2025 | 200 | 13,72 |
| 25.09.2025 | 200 | 13,8 |

[redacted]

| GWM Offpost-01 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 19.03.2020 | 18 | 5,68 |
| 09.06.2022 | 52,5 | |
| 03.11.2022 | 12,03 | 7,55 |
| 16.10.2024 | 17 | 9,07 |
| 21.10.2024 | 13 | 9,54 |
| 29.10.2024 | 26 | 9,86 |
| 04.11.2024 | 10 | 9,97 |
| 05.12.2024 | 13 | 10,72 |
| 14.01.2025 | 16 | 11,2 |
| 12.02.2025 | 17 | 10,41 |
| 11.03.2025 | 12 | 10,11 |
| 11.04.2025 | 9,79 | 8,9 |
| 09.05.2025 | 7,61 | 12,99 |
| 02.06.2025 | 12,2 | 13,25 |
| 01.07.2025 | 12,2 | 13,33 |
| 30.07.2025 | 10,9 | 13,47 |
| 28.08.2025 | 15 | 13,52 |
| 26.09.2025 | 19,1 | 13,82 |

| GWM Offpost-02 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 19.03.2020 | 18 | 3,97 |
| 26.10.2022 | 2,2 | 5,97 |
| 17.10.2024 | 0,23 | 5,77 |
| 21.10.2024 | 0,15 | 5,8 |
| 29.10.2024 | 0,108 | |
| 05.11.2024 | 0,055 | 5,86 |
| 05.12.2024 | 0,27 | 5,99 |
| 14.01.2025 | 0,093 | 5,96 |
| 12.02.2025 | 0,21 | 5,75 |
| 11.03.2025 | 0,022 | 5,99 |
| 11.04.2025 | 0,26 | 5,5 |
| 09.05.2025 | 0,245 | 5,66 |
| 02.06.2025 | 0,082 | 5,74 |
| 01.07.2025 | 0,037 | 5,85 |
| 30.07.2025 | 0,155 | 5,95 |
| 28.08.2025 | 0,304 | 6,08 |
| 26.09.2025 | 0,277 | 6,78 |

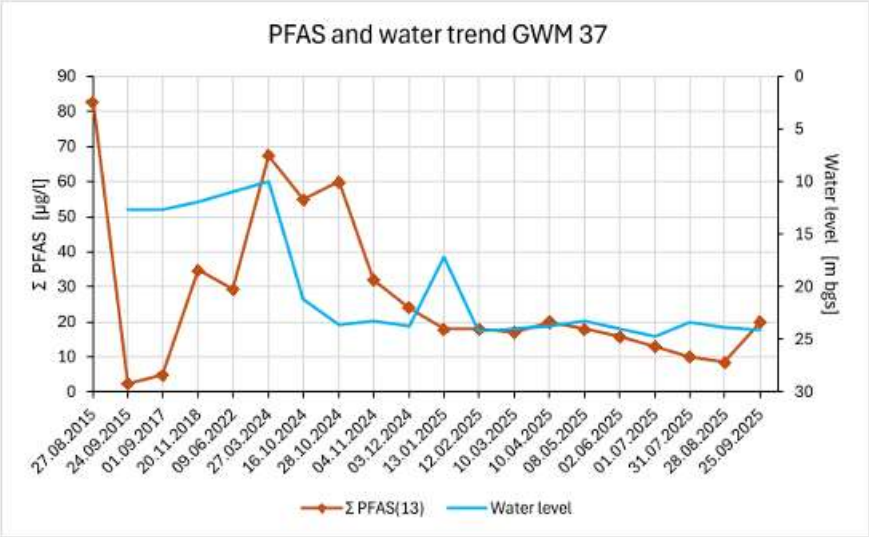
| GWM Offpost-03 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 19.03.2020 | 17 | 4,28 |
| 02.11.2022 | 18,82 | 6,65 |
| 16.10.2024 | 6,4 | 6,45 |
| 21.10.2024 | 8,8 | 6,51 |
| 05.11.2024 | 9 | 6,59 |
| 05.12.2024 | 3,9 | 6,4 |
| 14.01.2025 | 4,5 | 6,67 |
| 12.02.2025 | 4,4 | 6,54 |
| 11.03.2025 | 6,3 | 6,88 |
| 11.04.2025 | 12,8 | 6,46 |
| 09.05.2025 | 14,7 | 6,31 |
| 02.06.2025 | 5,12 | 6,51 |
| 01.07.2025 | 6,04 | 6,58 |
| 30.07.2025 | 13,9 | 6,59 |
| 28.08.2025 | 14,9 | 7,39 |
| 26.09.2025 | 15,2 | 8,09 |

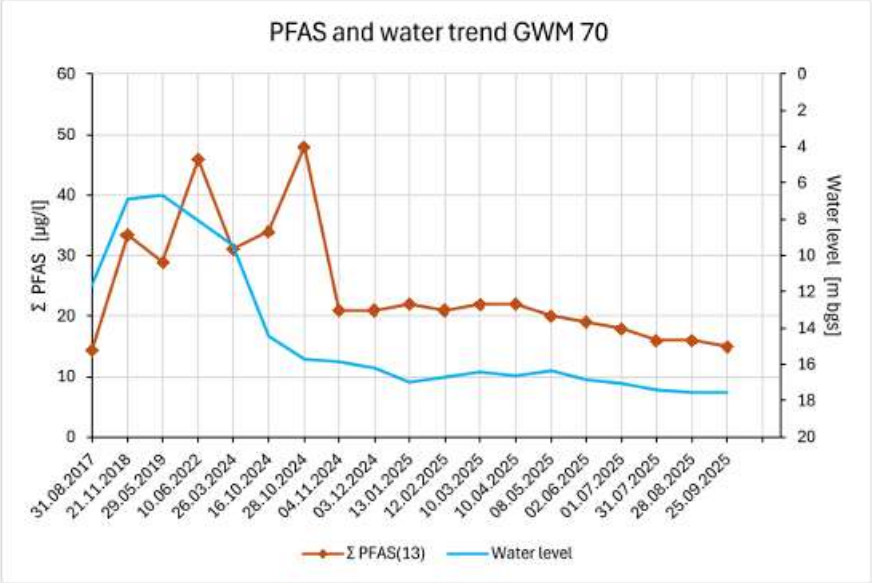
| GWM88 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 02.04.2024 | 109,5 | 5,966 |
| 04.11.2024 | 53 | 7,01 |
| 03.12.2024 | 45 | 7 |
| 13.01.2025 | 250 | 7,14 |
| 11.02.2025 | 120 | 7,15 |
| 10.03.2025 | 130 | 7,28 |
| 09.04.2025 | 93 | 7,2 |
| 07.05.2025 | 65 | 7,3 |
| 02.06.2025 | 49 | 7,15 |
| 01.07.2025 | 42 | 7,71 |
| 31.07.2025 | 27 | 7,16 |
| 28.08.2025 | 25 | 7,14 |
| 25.09.2025 | 26 | 7,3 |

| GWM91 | | |
|---|---|---|
| Datum | Σ PFAS(13) | Water level |
| | [µg/l] | [m bgs] |
| 25.03.2024 | 156,217 | 5,545 |
| 16.10.2024 | 5,5 | 6,63 |
| 04.11.2024 | 8,6 | 5,35 |
| 03.12.2024 | 5,8 | 5,19 |
| 13.01.2025 | 3,8 | 3,74 |
| 11.02.2025 | 6,6 | 5,23 |
| 10.03.2025 | 23 | 5,43 |
| 09.04.2025 | 18 | 5,39 |
| 07.05.2025 | 12 | 5,57 |
| 02.06.2025 | 29 | 5,79 |
| 01.07.2025 | 30 | 5,15 |
| 31.07.2025 | 20 | 5,01 |
| 28.08.2025 | 12 | 5,11 |
| 25.09.2025 | 8,3 | 5,23 |

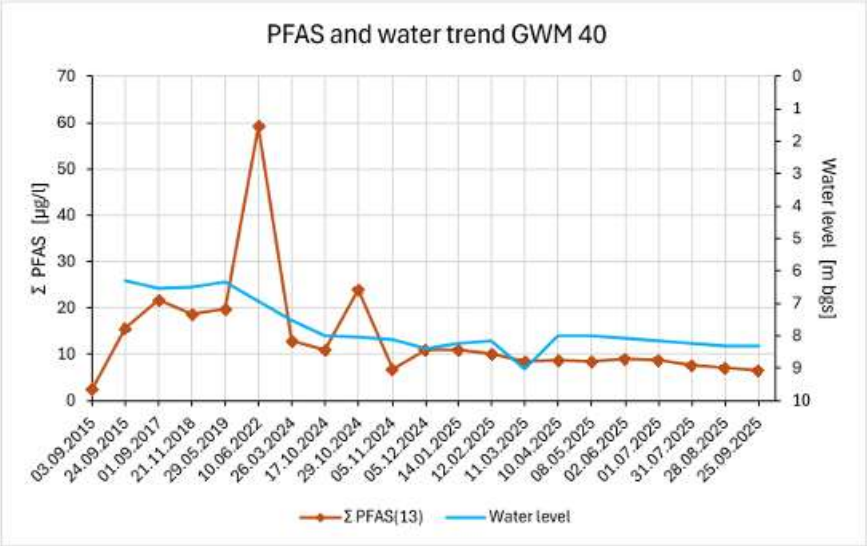
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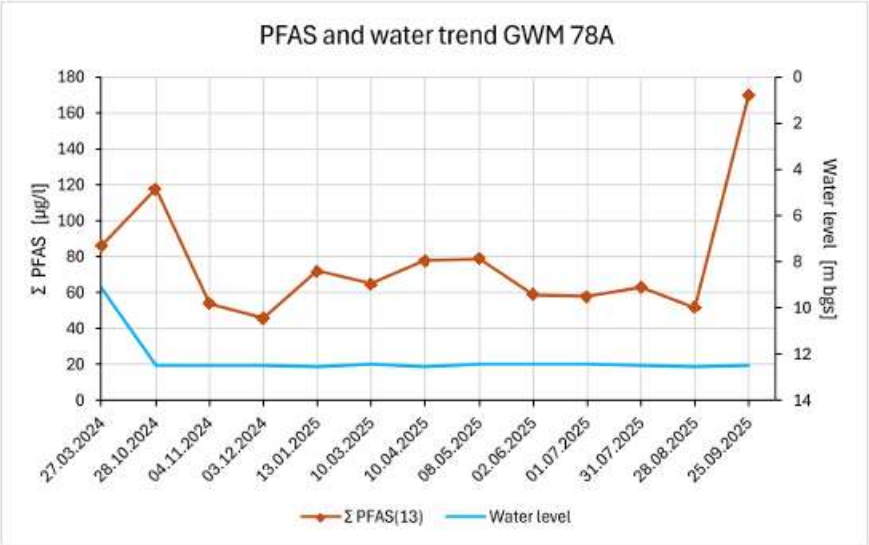
## GWM On-Post Grundwasser



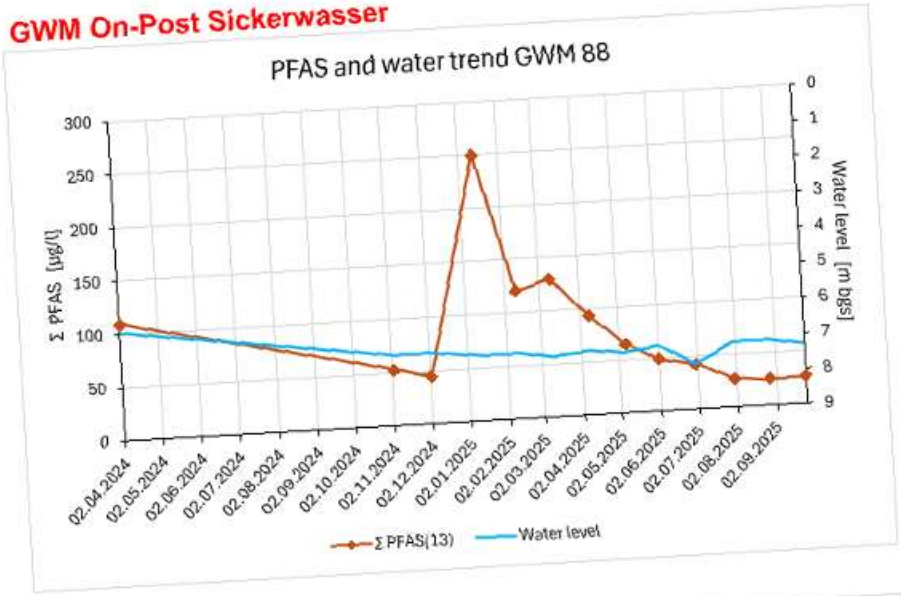
[redacted]

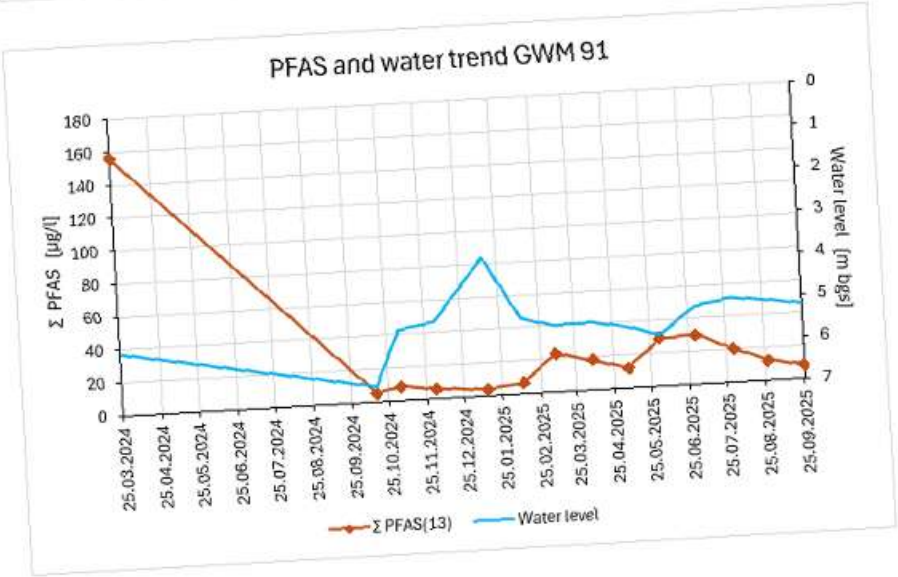

PFAS and water trend GWM 40
Σ PFAS [µg/l]
Water level [m bgs]
0
10
20
30
40
50
60
70
0
1
2
3
4
5
6
7
8
9
10
03.09.2015
24.09.2015
01.09.2017
21.11.2018
29.05.2019
10.06.2022
26.03.2024
17.10.2024
29.10.2024
05.11.2024
05.12.2024
14.01.2025
12.02.2025
11.03.2025
10.04.2025
08.05.2025
02.06.2025
01.07.2025
31.07.2025
28.08.2025
25.09.2025
Σ PFAS(13)
Water level


PFAS and water trend GWM 78A
Σ PFAS [µg/l]
Water level [m bgs]
0
20
40
60
80
100
120
140
160
180
0
2
4
6
8
10
12
14
27.03.2024
28.10.2024
04.11.2024
03.12.2024
13.01.2025
10.03.2025
10.04.2025
08.05.2025
02.06.2025
01.07.2025
31.07.2025
28.08.2025
25.09.2025
Σ PFAS(13)
Water level

[redacted]

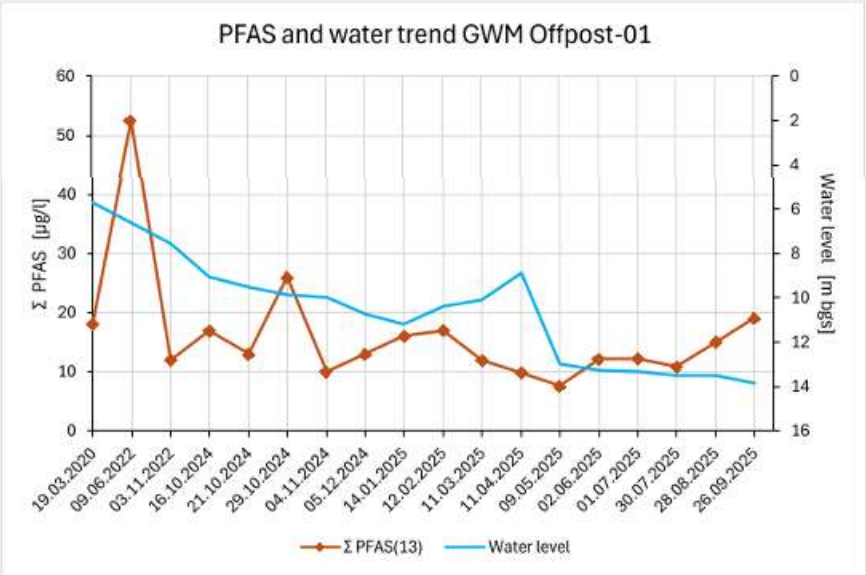
## GWM On-Post Sickerwasser

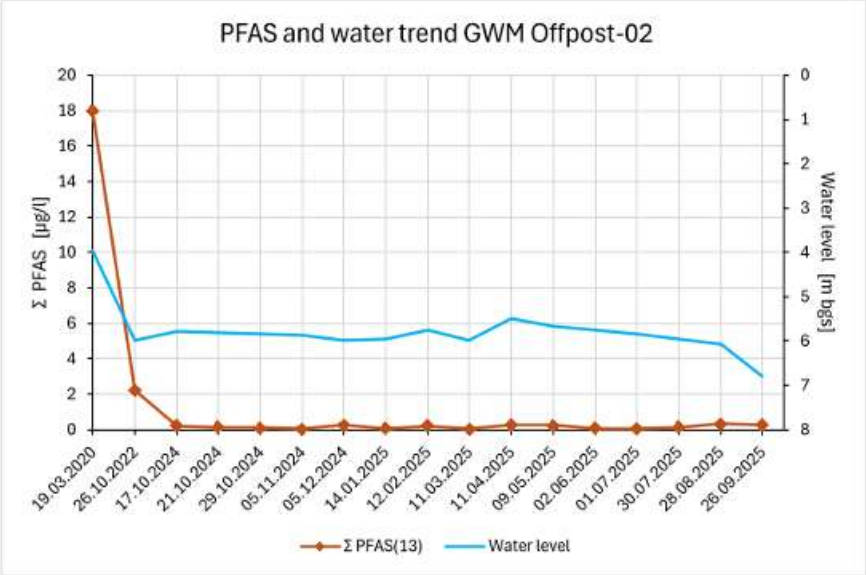


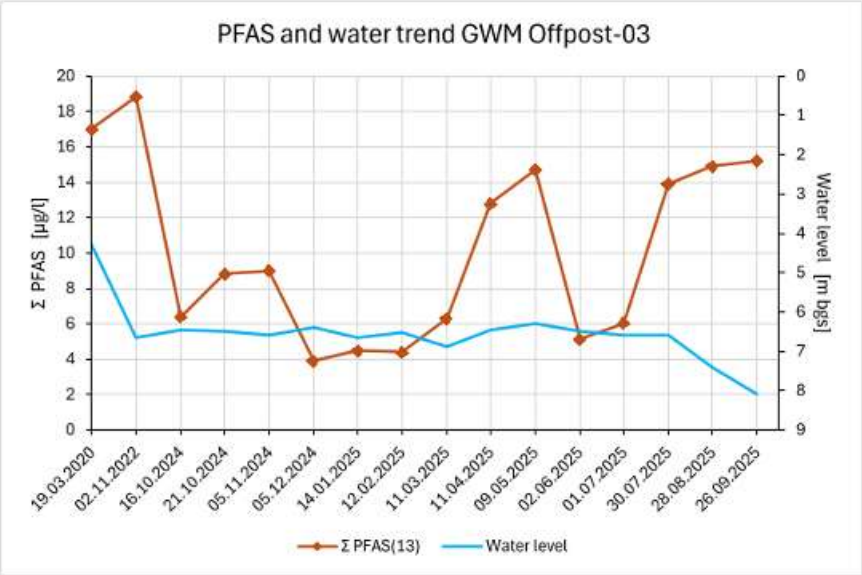
[redacted]

## GWM Off-Post Grundwasser



[redacted]


PFAS and water trend GWM Offpost-03
Σ PFAS [µg/l]
Water level [m bgs]
0
2
4
6
8
10
12
14
16
18
20
0
1
2
3
4
5
6
7
8
9
19.03.2020
02.11.2022
16.10.2024
21.10.2024
05.11.2024
05.12.2024
14.01.2025
12.02.2025
11.03.2025
11.04.2025
09.05.2025
02.06.2025
01.07.2025
30.07.2025
28.08.2025
26.09.2025
Σ PFAS(13)
Water level

# Anhang D
# Probenahmeprotokolle

D.1 Messstellen on-post

D.2 Messstellen off-post

[redacted]

D.1 on-post wells

D.1 Messstellen on-post

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 84A |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | 125 |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 9,96 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 18,00 |
| Date | 16.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:40 | 9,96 | start | / | / | / | / | / | / | schwach | braun / ohne |
| 2 | 13:45 | 11,95 | 50 | 7,13 | 262 | 5,40 | -29 | / | 12,3 | schwach | braun. / ohne |
| 3 | 13:50 | 12,41 | 100 | 7,20 | 258 | 5,60 | -25 | / | 12,1 | schwach | braun. / ohne |
| 4 | 14:00 | 12,73 | 200 | 7,08 | 264 | 3,80 | -25 | / | 12,2 | schwach | braun. / ohne |
| 5 | 14:10 | 12,97 | 300 | 7,09 | 265 | 4,40 | -26 | / | 12,2 | schwach | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84A / 16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 14:10 | Sampled by | |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,73 |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC²) (SWL) | 12,91 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 20,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8:50 | 12,91 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 8:55 | 12,21 | 50 | 7,09 | 340 | 3,20 | -27 | / | 12,3 | klar | farblos / ohne |
| 3 | 9:00 | 13,26 | 100 | 7,10 | 343 | 3,20 | -24 | / | 12,2 | klar | farblos / ohne |
| 4 | 9:10 | 13,28 | 200 | 7,10 | 345 | 3,25 | -21 | / | 12,2 | klar | farblos / ohne |
| 5 | 9:20 | 13,29 | 300 | 7,12 | 344 | 3,30 | -22 | / | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM82A / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 9:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=[π*(½*BD)²]*100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM81A |
| Location | Bismarck Keseme Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 9,22 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 13,50 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | 9,22 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 10:30 | 9,62 | 50 | 6,73 | 295 | 2,80 | -7 | / | 12,2 | klar | farblos / ohne |
| 3 | 10:35 | 9,91 | 100 | 6,75 | 290 | 2,75 | -8 | / | 11,6 | klar | farblos / ohne |
| 4 | 10:45 | 10,21 | 200 | 6,75 | 292 | 2,80 | -10 | / | 11,5 | klar | farblos / ohne |
| 5 | 10:55 | 10,50 | 300 | 6,72 | 291 | 2,85 | -10 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM81A/17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 10:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM801 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 10,32 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 14,00 |
| Date | 12.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:40 | 10,32 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 13:45 | 11,21 | 50 | 6,92 | 278 | 2,10 | -32 | / | 12,9 | klar | farblos / ohne |
| 3 | 13:50 | 11,47 | 100 | 6,86 | 259 | 2,85 | | / | 12,2 | klar | farblos / ohne |
| 4 | 14:00 | 11,56 | 200 | 6,82 | 261 | 2,90 | | / | 12,1 | klar | farblos / ohne |
| 5 | 14:10 | 11,67 | 300 | 6,79 | 252 | 2,95 | -30 | / | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM801 / 12.10.24 | Sampling Method | Purge Sample |
| Sampling Date & Time | 12.10.24 / 14:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ~15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(r*80)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 78B |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[2]) (SWL) | 10,69 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 15,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:05 | 10,69 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 12:10 | 11,45 | 50 | 6,86 | 236 | 2,50 | -36 | / | 13,2 | klar | farblos / ohne |
| 3 | 12:15 | 11,61 | 100 | 6,81 | 281 | 2,75 | -37 | / | 12,2 | klar | farblos / ohne |
| 4 | 12:25 | 11,70 | 200 | 6,82 | 298 | 2,90 | -38 | / | 12,0 | klar | farblos / ohne |
| 5 | 12:35 | 11,77 | 300 | 6,79 | 309 | 2,95 | -38 | / | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78B / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 12:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=π*(½*BD)²*1/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM72A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 13,27 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 12,75 (GOK) |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 16.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 13:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | ± 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - POK 1,65

zu wenig Wasser für PN

[redacted]

[1]VM=π*(½*BD)²*1/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 10i |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 9,77 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (1V=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 17.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | |
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Details |
| Sampling Date & Time | 17.10.24 11:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

neu RWS + Endtiefe gemessen

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 10,05 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 20,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:40 | 10,05 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 9:45 | 10,35 | 50 | 6,78 | 283 | 2,80 | -7 | / | 12,1 | klar | farblos / ohne |
| 3 | 9:50 | 10,45 | 100 | 6,78 | 284 | 3,05 | -7 | / | 11,9 | klar | farblos / ohne |
| 4 | 10:00 | 10,48 | 200 | 6,78 | 281 | 2,95 | -8 | / | 12,0 | klar | farblos / ohne |
| 5 | 10:10 | 10,50 | 300 | 6,72 | 278 | 2,65 | -8 | / | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 71 / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 10:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=ln*(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,70 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 14,43 (GOK) |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 16.09.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 10:45 | / | / | 6,79 | 745 | 5,43 | 12 | / | 12,1 | klar | farblos, ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 70 / 16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 10:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK – DOK 1,73

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCHH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM40 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[2]) (SWL) | 7,82 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 14,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

## Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 14:25 | 7,82 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 14:30 | 8,15 | 50 | 6,86 | 406 | 3,25 | -23 | / | 12,2 | klar | farblos / ohne |
| 3 | 14:35 | 8,39 | 100 | 6,82 | 393 | 3,20 | -22 | / | 11,9 | klar | farblos / ohne |
| 4 | 14:45 | 8,57 | 200 | 6,81 | 391 | 3,30 | -21 | / | 11,8 | klar | farblos / ohne |
| 5 | 14:55 | 8,56 | 300 | 6,78 | 389 | 3,35 | -22 | / | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Data & Time | 17.10.24 / 14:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

[1] VM=(π*(BD/2)²)/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 39 |
| Location | Bismarck Kaserne Kefferbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 5,37 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 15,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:15 | 5,37 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 11:20 | 5,55 | 50 | 6,81 | 309 | 3,10 | -16 | / | 12,4 | klar | farblos / ohne |
| 3 | 11:25 | 5,62 | 100 | 6,78 | 312 | 3,10 | -14 | / | 12,0 | klar | farblos / ohne |
| 4 | 11:35 | 5,63 | 200 | 6,74 | 314 | 2,95 | -16 | / | 11,9 | klar | farblos / ohne |
| 5 | 11:45 | 5,64 | 300 | 6,76 | 311 | 2,90 | -17 | / | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 39 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 38 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 9,32 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 17.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 10:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS + Endtiefe gemessen

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Bismarck Kaserne Kefferbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 21,15 (GOK) |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 16.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 11:20 | ✓ | ✓ | 7,07 | 393 | 7,43 | -3 | ✓ | 11,1 | schwach | rötlich, ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37/16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 11:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | +12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - POK 1,74

[redacted]

[1]VM=[(l/s*60)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM92A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[2]) (SWL) | 12,51 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 17,50 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/l) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:55 | 12,51 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 13:00 | 13,05 | 50 | 7,05 | 410 | 3,20 | -37 | / | 13,0 | klar | farblos / ohne |
| 3 | 13:05 | 13,51 | 100 | 6,98 | 417 | 3,45 | -36 | / | 12,2 | klar | farblos / ohne |
| 4 | 13:15 | 13,76 | 200 | 6,99 | 427 | 3,40 | -35 | / | 12,1 | klar | farblos / ohne |
| 5 | 13:25 | 13,84 | 300 | 7,01 | 428 | 3,45 | -35 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM92A / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=π*(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM91 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 6,63 (GOK) |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 16.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | 8. | | | | | |
| 2 | 11:30 | | | 7,52 | 310 | 3,76 | 2 | — | 16,7 | klar | farblos, ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM91 16.10.24 | Sampling Method | Pump Sample |
| Sampling Data & Time | 16.10.24 / 11:36 | Sampled by | |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - DOK 1,80

[redacted]

[1]VM=$\pi$*(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 30 |
| Location | Bismarck Keseme Kafferbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 7,65 (GOK) |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 16.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 12:15 | / | / | 7,15 | 235 | 2,30 | -241 | / | 13,9 | klar | farblos, ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 30 16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 12:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | + 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - POK 1,70

[redacted]

[1]VM=ln*(½*BD)²*Π/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 97 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 9,100 (GOK) |
| Volume per Meter (Vm) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC²) | / |
| Date | 16.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 12:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | +13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

¹VM=π*(½*BD)²/100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 96 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | |
| Static Water Level (m bToC[2]) (SWL) | 6,73 (GOK) |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (DV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 16.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 12:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - PO4 1,05

Messstelle trocken

[redacted]

[1]VM=ln(½*BD)²*π/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH t01 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 16.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 13:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

POK - GOK 1,07

Meßstelle trocken

[redacted]

[1]VM=[(π*(½*BD)²)]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM06 |
| Location | Bismarck Kaserne Kefferbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 9,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | |
| Static Water Level (m bToC[2]) (SWL) | 7,23 (GOK) |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 16.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 11:50 | / | / | 7,56 | 364 | 6,10 | -11 | / | 12,0 | stark | hellbraun, olive |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM06 16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 11:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - POK 1,69

[redacted]

[1]VM=[r²(π*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 10+ |
| Project Number | 24677024 |

| Well Details | |
|---|---|
| Well No. | GWM85A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | 19,93 |
| Volume per Meter (l/m) (VM) | |
| Static Water Level (m bToC[3]) (SWL) | 8,80 |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[3]) | 18,00 |
| Date | 17.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[3]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:10 | 8,80 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:15 | 9,01 | 50 | 7,06 | 452 | 3,00 | -26 | — | 12,6 | klar | farblos / ohne |
| 3 | 15:20 | 9,22 | 100 | 7,01 | 4151 | 3,25 | -27 | — | 12,1 | klar | farblos / ohne |
| 4 | 15:30 | 9,34 | 200 | 6,92 | 4156 | 3,10 | -31 | — | 12,0 | klar | farblos / ohne |
| 5 | 15:40 | 9,37 | 300 | 6,86 | 4150 | 3,30 | -29 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM85A / 17.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 17.10.24 / 15:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | + 15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(CD/2*100)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 24 B |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,68 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 14,03 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 22,00 |
| Date | 16.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe, Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:20 | 14,03 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 14:25 | 16,76 | 50 | 7,25 | 320 | 4,20 | -27 | / | 12,2 | klar | farblos / ohne |
| 3 | 14:30 | 17,72 | 100 | 7,06 | 274 | 3,60 | -25 | / | 11,6 | klar | farblos / ohne |
| 4 | 14:40 | 18,87 | 200 | 7,04 | 272 | 3,70 | -21 | / | 11,6 | klar | farblos / ohne |
| 5 | 14:50 | 19,66 | 300 | 7,06 | 275 | 3,90 | -20 | / | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 24B / 16.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 16.10.24 / 14:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, **Odor, etc.**)

**Notes**

[redacted]

[1]VM=π*(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 101 |
| Project Number | 24677804 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 24,76 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 21.10.24 |
| Duration of Purging (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (Hr:t:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 10:50 | 22,11 | / | 7,21 | 414 | 4,80 | -42 | / | 11,4 | klar | farblos / ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM37 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 10:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*(½*BD)²+½*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 10s |
| Project Number | 24677834 |

| Well Details | |
|---|---|
| Well No | GWM39 |
| Location | Bismarck Kaserne Kelterberg |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 15,82 |
| Volume per Meter (Lm) (Vlit) | / |
| Static Water Level (m bToC*) (SWL) | 5,31 |
| Water Column (m) (WC=TWD-SWL) | / |
| Aquifervolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 21.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:10 | 5,31 | start | | | | | | | klar | farblos / ohne |
| 2 | 11:15 | 5,58 | 50 | 7,12 | 151 | 4,60 | -37 | / | 11,2 | klar | farblos / ohne |
| 3 | 11:20 | 5,72 | 100 | 7,15 | 154 | 4,20 | -36 | / | 11,3 | klar | farblos / ohne |
| 4 | 11:30 | 5,77 | 200 | 7,14 | 157 | 4,00 | -36 | / | 11,3 | klar | farblos / ohne |
| 5 | 11:40 | 5,87 | 300 | 7,17 | 159 | 3,70 | -36 | / | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 11:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 2467824 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | 7,88 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpump-volumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 14,00 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox² (mV) | Redox² (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:30 | 7,88 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:35 | 8,14 | 50 | 6,91 | 396 | 4,25 | -36 | / | 12,7 | klar | farblos / ohne |
| 3 | 13:40 | 8,37 | 100 | 6,82 | 399 | 4,00 | -37 | / | 12,0 | klar | farblos / ohne |
| 4 | 13:50 | 8,53 | 200 | 6,79 | 398 | 4,10 | -41 | / | 12,0 | klar | farblos / ohne |
| 5 | 14:00 | 8,57 | 300 | 6,80 | 396 | 3,90 | -39 | / | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=(π*(½*BD)²)/1000, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCAH 104 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GWM20 |
| Location | Bismarck Kaserne Kellerbahn |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,20 |
| Volume per Meter (Ltr) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abgepumpte Menge (l) (SV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 21.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | S.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | / | | | |
| 2 | 9:15 | 15,22 | / | 7,05 | 270 | 6,50 | -11 | / | 11,7 | klar | farblos, ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM20 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 9:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[(r²x π)*1000]*1/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 10,33 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (~2xEV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SP3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 21.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:15 | 10,33 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 15:20 | 10,57 | 50 | 6,66 | 140 | 3,60 | -32 | / | 12,0 | klar | farblos / ohne |
| 3 | 15:25 | 10,66 | 100 | 6,73 | 139 | 4,25 | -35 | / | 11,8 | klar | farblos / ohne |
| 4 | 15:35 | 10,68 | 200 | 6,91 | 136 | 4,15 | -37 | / | 11,7 | klar | farblos / ohne |
| 5 | 15:45 | 10,70 | 300 | 6,81 | 137 | 4,75 | -37 | / | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 71 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 15:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(r²*π*30)*1/100, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 10a |
| Project Number | 246778D4 |

| Well Details | |
|---|---|
| Well No. | GWM 78A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 13,23 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xPV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC*) | |
| Date | 21.10.24 |
| Duration of Pumping (min) | |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | / | | | |
| 2 | 9,45 | 12,65 | / | 7,03 | 457 | 6,90 | -41 | / | 12,4 | klar | farblos / ohne |
| 3 | | | | | | | | / | | | |
| 4 | | | | | | | | / | | | |
| 5 | | | | | | | | / | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78A / 21.10.24 | Sampling Method | Purge Sample |
| Sampling Date & Time | 21.10.24 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=[(r²)*(3,14)*1]/1000, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 10x |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 78 B |
| Location | Bismarck Kaserne Kattenbeck |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 11,62 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (AV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (~2xAV*) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 21.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:00 | 11,62 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 12:05 | 12,11 | 50 | 8,15 | 136 | 2,00 | -417 | / | 11,9 | klar | farblos / ohne |
| 3 | 12:10 | 12,18 | 100 | 7,35 | 169 | 9,60 | -413 | / | 11,9 | klar | farblos / ohne |
| 4 | 12:20 | 12,22 | 200 | 7,32 | 171 | 5,40 | -412 | / | 11,9 | klar | farblos / ohne |
| 5 | 12:30 | 12,25 | 300 | 7,33 | 174 | 5,60 | -412 | / | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78 B / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 12:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=$\pi$*(½*BD)²*1/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 194 |
| Project Number | 2467.E24 |

| Well Details | |
|---|---|
| Well No. | GWM 80 A |
| Location | Bismarck Kaserne Kätterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | 11,75 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (V=VM*WC) | |

| Purging Information | |
|---|---|
| 1fach Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 14,00 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:30 | 11,75 | start | — | — | — | — | / | — | schwach | rotbr / ohne |
| 2 | 9:35 | 11,45 | 50 | 6,86 | 137 | 3,90 | -31 | / | | schwach | rotbr / ohne |
| 3 | 9:40 | 12,51 | 100 | 6,87 | 141 | 4,10 | -32 | / | | schwach | rotbr / ohne |
| 4 | 9:50 | 12,54 | 200 | 6,85 | 145 | 4,00 | -29 | / | | schwach | rotbr / ohne |
| 5 | 10:00 | 12,59 | 300 | 6,87 | 142 | 3,85 | -28 | / | | schwach | rotbr / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 80A / 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 / 10:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | < 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]Vertical Datum DHHN2016. [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 2467/624 |

| Well Details | |
|---|---|
| Well No. | GWM 8.1 1 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | 9,44 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (AV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xAV) | |
| Pumping Rate (l/min) | 10 |
| Pump Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 13,50 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:00 | 9,44 | start | — | — | — | — | / | 1 | klar | farblos / ohne |
| 2 | 16:05 | 9,71 | 50 | 6,78 | 350 | 3,70 | -40 | / | 11,9 | klar | farblos / ohne |
| 3 | 16:10 | 9,97 | 100 | 6,75 | 357 | 3,40 | -38 | / | 11,5 | klar | farblos / ohne |
| 4 | 16:20 | 10,36 | 200 | 6,77 | 377 | 3,20 | -37 | / | 11,5 | klar | farblos / ohne |
| 5 | 16:30 | 10,67 | 300 | 6,74 | 376 | 3,10 | -36 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM8.1 1 / 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 16:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]m bToC = m below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 82 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,73 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 12,94 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (~3xEV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:25 | 12,94 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:30 | 13,18 | 50 | 6,98 | 176 | 5,30 | -32 | — | 12,1 | klar | farblos / ohne |
| 3 | 14:35 | 13,25 | 100 | 6,99 | 177 | 4,90 | -31 | — | 11,8 | klar | farblos / ohne |
| 4 | 14:45 | 13,27 | 200 | 6,93 | 177 | 4,50 | -32 | — | 11,7 | klar | farblos / ohne |
| 5 | 14:55 | 13,29 | 300 | 6,91 | 178 | 4,40 | -33 | — | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 82 A / 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 / 14:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*¹Vol=[(°C)+273]*60)/[T02. *Below Top of Casing, ³Electrolytic Conductivity, ³Dissolved Oxygen, ⁴Ag/AgCl-Electrode, ⁵Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | ECAN Ulm |
| Project Number | 24617824 |

| Well Details | |
|---|---|
| Well No. | GWM 84A |
| Location | [redacted] Kaserne Kuffenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 10,46 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Sampling Information | |
|---|---|
| 3x Purge Volume (l) (=3xSV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,00 |
| Date | 21.10.24 |
| Duration of Purging (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:50 | 10,46 | start | | | | | / | | | |
| 2 | 12:55 | 12,79 | 50 | 7,02 | 137 | 5,30 | -39 | / | 12,2 | klar | farblos / ohne |
| 3 | 13:00 | 12,11 | 100 | 7,01 | 136 | 5,80 | -37 | / | 11,7 | klar | farblos / ohne |
| 4 | 13:10 | 12,67 | 200 | 6,99 | 139 | 5,10 | -31 | / | 10,8 | klar | farblos / ohne |
| 5 | 13:20 | 12,72 | 300 | 6,96 | 138 | 5,00 | -31 | / | 10,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 84A / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 13:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 14°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*Vol=(D/2)²*π*SWL/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 10a |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM84B |
| Location | Bismarck Kaserne Ketsch/ard |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 25,68 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 11,72 |
| Water Column (m) (WC=TWD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 21.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:35 | 11,72 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 13:40 | 12,31 | 50 | 7,00 | 137 | 3,90 | -39 | / | 12,2 | klar | farblos / ohne |
| 3 | 13:45 | 12,77 | 100 | 7,12 | 144 | 3,60 | -36 | / | 11,8 | klar | farblos / ohne |
| 4 | 13:55 | 12,55 | 200 | 6,98 | 139 | 4,30 | -31 | / | 11,0 | klar | farblos / ohne |
| 5 | 14:05 | 12,77 | 300 | 6,99 | 140 | 4,40 | -30 | / | 10,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM84B / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 14:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

*Vol=(r²*π*90)*1/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kesselle Kellenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | 9,65 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 16,00 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:05 | 9,65 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:10 | 9,85 | 50 | 6,98 | 442 | 4,50 | -43 | / | 12,4 | klar | farblos / ohne |
| 3 | 11:15 | 9,97 | 100 | 6,86 | 450 | 4,55 | -42 | / | 12,0 | klar | farblos / ohne |
| 4 | 11:20 | 10,06 | 200 | 6,82 | 448 | 4,25 | -44 | / | 11,9 | klar | farblos / ohne |
| 5 | 11:35 | 10,14 | 300 | 6,81 | 444 | 4,05 | -44 | / | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 85A 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 / 11:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ± 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(BD²-CD²)/4]/100, [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [4]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24977824 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 21.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (uS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 9:55 | 7,26 | / | 7,21 | 437 | 6,85 | -10 | / | 12,0 | stark | braun / ohne |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM86 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 9:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=$\pi$*(½*BD)²*1/100 [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAR 10h |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Aquifer volume (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xEV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 21.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 9:40 | — | — | — | — | — | — | — | — | — | — |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | — | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 9:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*Vol=Ø(r²x3,60)*VM/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAR 10a |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 9,00 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (DV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xDV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 27.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 9:35 | 7,11 | — | — | — | — | — | | — | — | — |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | — | Sampling Method | Pump Sample |
| Sampling Date & Time | 27.10.24 / 9:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

[1]VM=[(r²)*(π/1000)]*1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAK 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM89 |
| Location | Bismarck Kesselhaus Kellerboden |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Approximate Volume (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 27.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 9:30 | — | — | — | — | — | — | — | — | — | — |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Schlauch |
| Sampling Date & Time | 27.10.24 9:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=(r²*π*1000)*1/1000, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Bismarck Kaserne Ketterberg |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (DV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xDV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 27.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (uS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | 10:20 | — | — | — | — | — | — | / | — | — | — |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | — | Sampling Method | Pump Sample |
| Sampling Date & Time | 27.10.24 / 10:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | ± 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

[1]VM=π(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GwM 91 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 8,00 |
| Volume per Meter (Ltr.) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2*3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 21.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.² (µS/cm) | D.O.³ (mg/L) | Redox⁴ (mV) | Redox⁵ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | — | | | |
| 2 | 10:40 | 4,177 | — | 7,60 | 307 | 2,40 | -38 | — | 13,6 | klar | farblos / ohne |
| 3 | | | | | | | | — | | | |
| 4 | | | | | | | | — | | | |
| 5 | | | | | | | | — | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GwM 91 / 21.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 / 10:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=π*(¼*BD)²*1/100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 2467624 |

| Well Details | |
|---|---|
| Well No. | GWM 92 A |
| Location | Bismarck Kaserne Kattenbardi |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 12,97 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 17,50 |
| Date | 22.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:20 | 12,97 | start | — | — | — | — | / | — | klar | klar / ohne |
| 2 | 10:25 | 13,41 | 50 | 7,04 | 3,17 | 2,90 | -48 | / | 12,9 | klar | farblos / ohne |
| 3 | 10:30 | 13,66 | 100 | 6,94 | 3,21 | 3,20 | -49 | / | 12,1 | klar | farblos / ohne |
| 4 | 10:40 | 13,81 | 200 | 6,97 | 392 | 3,25 | -48 | / | 12,0 | klar | farblos / ohne |
| 5 | 10:50 | 13,93 | 300 | 6,96 | 410 | 3,40 | -49 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 92 A 22.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 10:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[illegible] [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCNH 150 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kattenbrook |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | 9,51 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (SV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 21.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 15:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nun RWS und Endtiefe gemessen

[redacted]

*VM=[π*(½*BD)²]/100. [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | COAN WP |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM72 |
| Location | Bismarck Kaserne Kellerbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 10,39 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 21.10.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | |
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 21.10.24 15:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 16° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RWS und Endtiefe gemessen

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | DOW HQ |
| Project Number | 2497 7834 |

| Well Details | |
|---|---|
| Well No. | GWM 85 A |
| Location | Bernsteck (Gasse Kirchweg) |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 19,83 |
| Volume per Meter (l/m) (Vol) | / |
| Static Water Level (m bTOC) (SWL) | 9,75 |
| Product Volume (ml) (PRD, PRT, SHN) | / |
| Abstraction Volume (l) (ABV, ABM) | 300 |

| Pumping Information | |
|---|---|
| Min Purge Volume (l) (MPV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bTOC) | |
| Date | 29.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Unit | Time (HH:mm) | Water Level (m bTOC) | Volume Removed (l) | Measured Parameters: pH | EC (µS/cm) | DO (mg/L) | Redox (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:45 | 9,75 | start | — | — | — | — | — | klar | farblos / ohne |
| 2 | 10:50 | 9,94 | 50 | 6,68 | 415 | 4,15 | -39 | 12,2 | klar | farblos / ohne |
| 3 | 10:55 | 9,12 | 100 | 6,71 | 415 | 4,25 | -38 | 11,8 | klar | |
| 4 | 11:05 | 9,23 | 200 | 6,74 | 406 | 4,30 | -38 | 11,6 | klar | |
| 5 | 11:15 | 9,27 | 300 | 6,73 | 411 | 4,25 | -35 | 11,6 | klar | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 85 A / 11:15 | Sampling Method | Pump Sample |
| Sampling Date & Time | 29.10.24 / 11:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | ± 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Observations or Deviations (Odour, Turbidity, Sediment, Odour, etc.)

Notes

[redacted]

Abbreviations: *SQ3 = Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCHN Kh |
| Project Number | 2467724 |

| Well Details | |
|---|---|
| Well No. | GWM 84B |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 25,68 |
| Volume per Meter (l/m) (VPM) | / |
| Static Water Level (m bTOC) (SWL) | 15,01 |
| Water Column (m) (WC= WD-SWL) | / |
| Abpumpleistung nach EN (Vol=WC*VPM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xEV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bTOC) | 22,00 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:00 | 15,01 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 15:05 | 17,49 | 50 | 6,46 | 280 | 4,70 | -15 | / | 12,5 | klar | farblos / ohne |
| 3 | 15:10 | 18,30 | 100 | 6,461 | 281 | 2,90 | -18 | / | 11,3 | klar | farblos / ohne |
| 4 | 15:20 | 18,71 | 200 | 6,57 | 280 | 3,15 | -17 | / | 11,6 | klar | farblos / ohne |
| 5 | 15:30 | 18,941 | 300 | 6,53 | 282 | 3,25 | -16 | / | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84B | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 15:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 17° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

[1] Wenner (a=80) µS/100 [2] Below Top of Casing [3] Electrolytic Conductivity [4] Dissolved Oxygen [5] Ag/AgCl-Electrode [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCHK Ybh |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 304 A |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TD) | 17,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bTOC*) (SWL) | 10,69 |
| Water Column (m) (WC= TD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | / |
| Pumping Rate (l/min) | 10 |
| Purge started | 10:03 |
| Pump Intake Depth (m bTOC*) | 16,00 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 10:15 | 10,69 | start | / | / | / | / | / | / | schwach | wasserhell / ohne |
| 2 | 10:20 | 12,31 | 50 | 6,48 | 275 | 3,90 | -22 | / | 12,3 | klar | farblos / ohne |
| 3 | 10:25 | 12,82 | 100 | 6,51 | 279 | 3,75 | -21 | / | 12,2 | klar | farblos / ohne |
| 4 | 10:35 | 13,05 | 200 | 6,50 | 279 | 3,45 | -18 | / | 12,2 | klar | farblos / ohne |
| 5 | 10:45 | 13,21 | 300 | 6,48 | 280 | 3,40 | -17 | / | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 304 A / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 10:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sunny | Air Temperature | + 17° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Water(-n°180)*1/100 *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCAN 101 |
| Project Number | 24827624 |

| Well Details | |
|---|---|
| Well No. | GWM 82 A |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (Vl/m) | / |
| Static Water Level (m bToC*) (SWL) | 13,56 |
| Water Column (m) (WC= WD-SWL) | / |
| Approximate Purge Volume (l) (3xVol/m*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:30 | 13,58 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 10:35 | 13,82 | 50 | 6,62 | 349 | 4,40 | -19 | / | | klar | farblos / ohne |
| 3 | 10:40 | 13,88 | 100 | 6,74 | 348 | 3,70 | -19 | / | | klar | farblos / ohne |
| 4 | 10:50 | 14,00 | 200 | 6,75 | 350 | 4,10 | -18 | / | | klar | farblos / ohne |
| 5 | 11:00 | 14,01 | 300 | 6,73 | 351 | 4,05 | -18 | / | | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 82 A / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 11:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Vol=pi*(r*BD)^2/1000 *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHN 101 |
| Project Number | 2457824 |

| Well Details | |
|---|---|
| Well No. | GWM 81 A |
| Location | Bismarck Kaserne Kaltenkirchen |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm): (BD) | / |
| Casing Diameter (mm): (CD) | / |
| Total Well Depth (m): (WD) | 14,90 |
| Volume per Meter (l/m): (VM) | / |
| Static Water Level (m bToC²): (SWL) | 9,65 |
| Water Column (m): (WC=WD-SWL) | / |
| Abpumpvolumen (l): (3*VM/1000) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l): (3xEV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 13,50 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:00 | 9,65 | start | / | / | / | / | / | / | schwach | roh / ohne |
| 2 | 12:05 | 9,91 | 50 | 6,50 | 284 | 3,46 | -30 | / | 12,1 | schwach | roh / ohne |
| 3 | 12:10 | 10,15 | 100 | 6,74 | 294 | 3,15 | -25 | / | 11,7 | schwach | roh / ohne |
| 4 | 12:20 | 10,52 | 200 | 6,72 | 291 | 3,10 | -24 | / | 11,7 | schwach | roh / ohne |
| 5 | 12:30 | 10,69 | 300 | 6,73 | 293 | 2,85 | -26 | / | 11,6 | schwach | roh / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 81 A / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 12:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 15° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

¹Volt/cm (x 1000)/1000, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHN 10 |
| Project Number | 4497782 |

| Well Details | |
|---|---|
| Well No. | GWM 30A |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 14,63 |
| Volume per Meter (l/m) (VPM) | — |
| Static Water Level (m bToC) (SWL) | 11,78 |
| Water column (m) (TWD - SWL) | — |
| Abstich [illegible] (WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (MPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC) | 14,00 |
| Date | 29.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Unit | Time (hh:mm) | Water Level (m bToC) | Volume Replaced (l) | Measured Parameters: pH | EC (µS/cm) | DO (mg/L) | Redox (mV) | Resist. (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 11,78 | start | — | — | — | — | — | — | schwach | wolkig / ohne |
| 2 | 10:05 | 12,46 | 50 | 7,05 | 274 | 4,80 | -39 | — | 12,7 | schwach | wolkig / ohne |
| 3 | 10:10 | 12,50 | 100 | 6,90 | 275 | 4,25 | -36 | — | 12,0 | schwach | wolkig / ohne |
| 4 | 10:20 | 12,55 | 200 | 6,95 | 279 | 4,15 | -31 | — | 12,0 | schwach | wolkig / ohne |
| 5 | 10:30 | 12,56 | 300 | 6,93 | 277 | 4,10 | -31 | — | 11,9 | schwach | wolkig / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | |
|---|---|
| Sample Name | GWM 30A / 29.10.24 |
| Sampling Date & Time | 29.10.24 / 10:30 |
| Preservation | 4°C (see sample labels and/or CoC document) |
| Weather | sonnig |
| Parameters | s. CoC |
| Containers | s. CoC |

| Sampling Method | Pump Sample |
|---|---|
| Sampled by | [redacted] |
| | |
| Air Temperature | + 13° |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

Abbr.: [illegible] Redox Type of Cavity, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCAN 101 |
| Project Number | 24077824 |

| Well Details | |
|---|---|
| Well No. | GWM 78B |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (Dm) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 12,16 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=SV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:30 | 12,16 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:35 | 12,85 | 50 | 6,69 | 269 | 2,35 | -19 | — | 11,9 | klar | farblos / ohne |
| 3 | 13:40 | 12,99 | 100 | 6,62 | 372 | 3,05 | -25 | — | 11,8 | klar | farblos / ohne |
| 4 | 13:50 | 13,05 | 200 | 6,61 | 376 | 4,90 | -21 | — | 11,8 | klar | farblos / ohne |
| 5 | 14:00 | 13,11 | 300 | 6,60 | 376 | 4,75 | -20 | — | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78B / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 17° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Vm=(π*(r/100)²)*1000, *Below Top of Casing, Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCUW Wel |
| Project Number | 3407781a |

| Well Details | |
|---|---|
| Well No. | GWM 78A |
| Location | Bismarck Kaserne Kelheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 13,23 (GOK) |
| Volume per Meter (l/m) (Vol/) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=TWD-SWL) | / |
| Abpumpvolumen (l) (SV=WC*Vol/) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 12,45 | start | 7,11 | 479 | 4,30 | -6 | / | 11,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM78A / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

¹Vol-fache, *BOK/TOC, ¹Below Top of Casing, ²Electrolytic Conductivity, ³Dissolved Oxygen, ⁴Ag/AgCl-Electrode, ⁵Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCMH Hpt. |
| Project Number | 24077824 |

| Well Details | |
|---|---|
| Well No. | CMW72 |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,05 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bTOC[2]) (SWL) | 10,76 |
| Water Column (m) (WC=WD-SWL) | / |
| Abgesunkene Säule (l) (3(CD/2)²*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bTOC) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (uS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | klar | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 12:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 18° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

neue RWS und Endtiefe gemessen

[redacted]

[1](Volume (l)=(BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCHN 19c |
| Project Number | 24977824 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Kelsterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bTOC*) (SWL) | 13,58 |
| Water Column (m) (WC=WD-SWL) | / |
| Approximate Volume (l) (V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bTOC*) | 20,00 |
| Date | 23.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:15 | 13,58 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 11:20 | 13,81 | 50 | 6,55 | 279 | 2,80 | -17 | / | 12,1 | klar | farblos / ohne |
| 3 | 11:25 | 13,91 | 100 | 6,53 | 276 | 2,70 | -14 | / | 12,1 | klar | farblos / ohne |
| 4 | 11:35 | 13,94 | 200 | 6,55 | 274 | 2,65 | -15 | / | 12,0 | klar | farblos / ohne |
| 5 | 11:45 | 13,96 | 300 | 6,54 | 271 | 2,60 | -16 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 71 / 23.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 23.10.24 / 11:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 12°C |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Well depth (= BD/VTOC Below Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | [illegible] |
| Project Number | 14577824 |

| Well Details | |
|---|---|
| Well No. | GWM70 |
| Location | Bismarck Kaserne Kehrsbuch |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,70 |
| Volume per Meter (l/m) (Vl/m) | / |
| Static Water Level (m bToC²) (SWL) | |
| Water Column (m) (WC=WD-SWL) | / |
| Approximate Volume (l) (3V=Vl/m*WC) | / |

| Purging Information | |
|---|---|
| Total Purge Volume (l) (=3xEV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC²) | / |
| Date | / |
| Duration of Pumping (min) | 28.10.24 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (hh:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox² (mV) | Redox³ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:00 | 15,70 | / | 7,01 | 287 | 4,30 | -25 | / | 11,0 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

¹Well-ID (e.g. GWP1/20), ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | [illegible] |
| Project Number | [illegible] |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kalkriese |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (ltr) (Vol) | / |
| Static Water Level (m bToC) (SWL) | 7,87 |
| Water Column (m) (WC= WD-SWL) | / |
| Approximate Volume (l) (3xVol or WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xV) | / |
| Purging Flow (l/min) | 20 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC) | 14,00 |
| Date | 29.10.24 |
| Duration of Purging (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Log | Time (HH:mm) | Water Level (m bToC) | Volume Removed (l) | Measured Parameters: pH | EC* (µS/cm) | DO* (mg/l) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Purge / Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:30 | 7,87 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:35 | 8,15 | 50 | 6,86 | 358 | 4,80 | -35 | / | 12,0 | klar | farblos / ohne |
| 3 | 11:40 | 8,39 | 100 | 6,85 | 395 | 4,75 | -34 | / | 11,8 | klar | farblos / ohne |
| 4 | 11:50 | 8,55 | 200 | 6,91 | 401 | 4,65 | -33 | / | 11,8 | klar | farblos / ohne |
| 5 | 12:00 | 8,58 | 300 | 6,88 | 399 | 4,60 | -32 | / | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 40 / 29.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 29.10.24 / 12:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 18° |
| Permeation | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Remarks

[redacted]

*Readings in 3 Bore Vol.; Before Top of Casing; Electrolytic Conductivity; Dissolved Oxygen; Ag/AgCl-Electrode; Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCHN 100 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 39 |
| Location | Bismarck Kaserne Kellenbrink |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (V/M) | / |
| Static Water Level (m bToC*) (SWL) | 5,39 |
| Water Column (m) (WC=WD-SWL) | / |
| Approximate Initial (l) (EV=V/M*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xEV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (uS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:45 | 5,39 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 12:50 | 5,56 | 50 | 6,76 | 293 | 3,85 | -32 | / | 11,6 | klar | farblos / ohne |
| 3 | 12:55 | 5,61 | 100 | 6,96 | 310 | 3,30 | -29 | / | 12,0 | klar | farblos / ohne |
| 4 | 13:05 | 5,63 | 200 | 6,66 | 312 | 3,15 | -27 | / | 12,0 | klar | farblos / ohne |
| 5 | 13:15 | 5,65 | 300 | 6,84 | 311 | 2,85 | -25 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 39 / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 13:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 12° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Water (=BD)/V100 *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 2407724 |

| Well Details | |
|---|---|
| Well No. | GEM 38 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 15,85 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 9,65 |
| Water Column (m) (TWD-SWL) | / |
| Approximate Volume (l) (BVxVM) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | / |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 12:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 10 |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RLS und Endtiefe gemessen

[redacted]

[1] Vol = (π*BD²)/4/100, [2] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Conversion

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCAH 10: |
| Project Number | 24ST824 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (Vol) | / |
| Static Water Level (m bTOC*) (SWL) | / |
| Water Column (m) (WD - WD SWL) | / |
| Abpumpvolumen (l) (SWL x Vol) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (3 x SWV) | / |
| Pumping Rate (l/min) | / |
| Purge Started | / |
| Pump Intake Depth (m bTOC*) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.15 | 23,56 | klar | 7,09 | 4118 | 4,35 | -6 | / | 11,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37 / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 10:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 12° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

*Meters (+/-0.01m) Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCHN 104 |
| Project Number | 2467782e |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kaltenkirchen |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 13,05 |
| Water Column (m) (WD- WD-SWL) | / |
| Abgesunkenvolumen (l) (3*r²*VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xEV) | / |
| Pumping Rate (l/min) | 10 |
| Purge started | 5Q3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 28.10.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (uS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:50 | 13,05 | start | / | / | / | / | / | / | schwach | wolkig / ohne |
| 2 | 15:55 | 13,51 | 50 | 6,52 | 432 | 5,35 | -29 | / | 12,6 | stark | wolkig / ohne |
| 3 | 16:00 | 13,89 | 100 | 6,61 | 432 | 5,25 | -29 | / | 12,1 | stark | wolkig / ohne |
| 4 | 16:10 | 14,05 | 200 | 6,75 | 431 | 5,45 | -28 | / | 12,0 | stark | wolkig / ohne |
| 5 | 16:20 | 14,13 | 300 | 6,81 | 427 | 5,40 | -30 | / | 12,0 | stark | wolkig / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 92A / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 16:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 16° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| [redacted] |

*Weight (=BD²/4/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCHK YC |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM01 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (Vol) | / |
| Static Water Level (m bToC[1]) (SWL) | / |
| Water Column (m) (WC = WD-SWL) | / |
| Abgeschöpfvolumen (l) (3*WC*Vol) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (1-3xBV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC[1]) | |
| Date | |
| Duration of Pumping (min) | |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 8,27 | / | 7,12 | 321 | 1,60 | -28 | / | 11,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM01 / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 10:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 12° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

[1] Height of Water Column (WC) = Well Depth (WD) - Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCHK 101 |
| Project Number | 24977824 |

| Well Details | |
|---|---|
| Well No. | GEM90 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | / |
| Casing Diameter (mm) (CD): | / |
| Total Well Depth (m) (WD): | 8,00 |
| Volume per Meter (l/m) (Vpl): | / |
| Static Water Level (m bToC*) (SWL): | / |
| Water Column (m) (WC=WD-SWL): | / |
| Abgepumpvolumen (l) (3Vol/Barrel): | / |

| Purging Information | |
|---|---|
| Min Purge Volume (3 x Vol) | / |
| Pumping Rate (l/min) | / |
| Purge duration | / |
| Pump Intake Depth (m bToC*) | |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 7,73 | / | / | / | / | / | / | / | / | / / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 9:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | 2 n° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

*Width [(a*60)+b]/100, Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCUS Vec |
| Project Number | 24077824 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kaserne Kellenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (40M) |
| Volume per Meter (l/m) (Vol') | / |
| Static Water Level (m bToC²) (SWL) | / |
| Water Column (m) (WD-WD-SWL) | / |
| Abpumpvolumen (l) (3V-WC-WD) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (1-2xEV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC²) | / |
| Date | 28.10.24 |
| Duration of Purging (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox² (mV) | Redox² (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:15 | / | / | / | / | / | / | / | / | / | / / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 9:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

Messstelle trocken

[redacted]

¹Vol=(π·(½*BD)²)*100, ²Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCarbX tpt |
| Project Number | 1457824 |

| Well Details | |
|---|---|
| Well No. | GEM88 |
| Location | Biemsick Kaserne Kaltenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WD-MD-SWL) | / |
| Abpumpvolumen (l) (3(*VM*VC)) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (1-3 EV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 22.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (Hr:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | DO* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 6,89 | start | / | / | / | / | / | / | / | / / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 22.10.24 / 9:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

PV nicht möglich, Wassermenge zu gering

[redacted]

*Vol.-[l]=[(π*BD)²/4*100-Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCPM 1.21 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GeM87 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (Vol) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=WC*Vol) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xEV) | / |
| Pumping Rate (l/min) | / |
| Purge finished | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:25 | / | / | / | / | / | / | / | / | / | / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pumpe Sample |
| Sampling Date & Time | 28.10.24 / 9:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

Messstelle trocken

[redacted]

*Vol=[r²*(π*80)]*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCMH 106 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GKM 86 |
| Location | Bismarck Kaserne Kelkheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 28.10.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (Hr:Lmin) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:35 | 7,43 | / | 7,16 | 445 | 1,80 | -10 | / | 11,7 | schwach | bräunlich / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GKM 86 / 28.10.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.10.24 / 9:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(D/2)²]/1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | [illegible] |
| Project Number | [illegible] |

| Well Details | |
|---|---|
| Well ID | GWM 84 A |
| Location | Bismarck Kaserne [illegible] |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC) (SWL) | 10,83 |
| Water Column (m) (WD - SWL) | / |
| [illegible] | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume [illegible] | — |
| [illegible] | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC) | 12,00 |
| Date | 04.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (hh:mm) | Water Level (m bToC) | Volume Removed (l) | pH | E.C. (µS/cm) | D.O. (mg/L) | Redox (mV) | Redox (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:30 | 10,83 | start | — | — | — | — | / | — | schwach | [illegible] / ohne |
| 2 | 11:35 | 12,47 | 50 | 6,54 | 264 | 3,45 | -24 | / | 11,1 | schwach | [illegible] / ohne |
| 3 | 11:40 | 12,86 | 100 | 6,52 | 268 | 3,40 | -22 | / | 11,1 | schwach | [illegible] / ohne |
| 4 | 11:50 | 13,09 | 200 | 6,51 | 264 | 3,30 | -20 | / | 11,1 | schwach | [illegible] / ohne |
| 5 | 15:00 | 13,25 | 300 | 6,52 | 266 | 3,25 | -19 | / | 11,1 | schwach | [illegible] / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84 A / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 15:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample table and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +9° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[illegible] Below Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl Electrode, Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHM Kbh. |
| Project Number | Level 1624 |

| Well Details | |
|---|---|
| Well ID | GWM 32A |
| Location | Denmark Kasserne Kavelinge |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 24,73 |
| Volume per Meter (l/m) (Vol) | / |
| Static Water Level (in mTOD) (SWL) | 13,78 |
| Water Column (m) (TWD - SWL) | / |
| Abstraction rate (l/min) (Q = Vol/t) | 300 |

| Purging information | |
|---|---|
| Min Purge Volume (3 x Vol) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (in mTOD) | 20,00 |
| Date | 04.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

## Total Parameters

| Vol | Time (HH:mm) | Water Level (in mTOD) | Volume removed (l) | Measured Parameters: pH | EC¹ (µS/cm) | DO² (mg/L) | Redox³ (mV) | Fe(II) (mg/L) | Water Temp (°C) | Turbidity | Further Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.45 | 13,78 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 10:50 | 13,95 | 50 | 6,97 | 312 | 4,35 | -22 | / | 11,3 | klar | farblos / ohne |
| 3 | 10:55 | 14,00 | 100 | 6,85 | 315 | 4,25 | -22 | / | 11,6 | klar | farblos / ohne |
| 4 | 11:05 | 14,03 | 200 | 6,82 | 317 | 4,35 | -24 | / | 11,6 | klar | farblos / ohne |
| 5 | 11:15 | 14,04 | 300 | 6,81 | 318 | 4,40 | -26 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM32A / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 11:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample table and/or CoC document) | | |
| Weather | neblig | Air Temperature | 6,40 |
| Parameter | s. CoC | | |
| Container | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Color, etc.)

Remarks

[redacted]

¹Volt(s) (+/-500mV), (Vol. Sample Type of Casing, ²Electrolytic Conductivity, ³Dissolved Oxygen, ⁴Ag/AgCl-Electrode, ⁵Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHM Kbh |
| Project Number | 2467624 |

| Well Details | |
|---|---|
| Well ID | GWM 81 A |
| Location | Bismarck, Kasserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BDI) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VpM) | / |
| Static Water Level (m uTuC*) (SWL) | 9,76 |
| Water Column (m) (WC = WD - SWL) | / |
| Approximate Volume (l) (3 x WC x VpM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xWC) | — |
| Purging Time (min) | 10 |
| Purge Setting | 503 |
| Pump Intake Depth (m uTuC*) | 13,50 |
| Date | 04.11.24 |
| Estimated Pumping Rate | 30 |
| Purged by | [redacted] |

Field Parameters

| Ind. | Time (HH:mm) | Water Level (m uTuC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:15 | 9,76 | start | — | — | — | — | / | — | schwach | trüb / ohne |
| 2 | 11:20 | 10,00 | 50 | 7,72 | 6,71 | 2,95 | -31 | / | 10,6 | schwach | trüb / ohne |
| 3 | 11:25 | 10,23 | 100 | 7,77 | 6,75 | 3,05 | -29 | / | 10,9 | schwach | trüb / ohne |
| 4 | 11:35 | 10,56 | 200 | 7,76 | 6,77 | 3,10 | -27 | / | 11,0 | schwach | trüb / ohne |
| 5 | 11:45 | 10,72 | 300 | 7,75 | 6,76 | 2,90 | -24 | / | 11,1 | schwach | trüb / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 81 A / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +7,0 |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

Notes

[redacted]

*Values to be recorded (viz. Status Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM 30A |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,03 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | 12,07 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 14,00 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 12,07 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 10:05 | 12,68 | 50 | 6,95 | 261 | 2,80 | -35 | / | 10,4 | klar | farblos / ohne |
| 3 | 10:10 | 12,75 | 100 | 6,91 | 268 | 2,85 | -34 | / | 11,3 | klar | farblos / ohne |
| 4 | 10:20 | 12,79 | 200 | 6,89 | 270 | 2,90 | -34 | / | 11,5 | klar | farblos / ohne |
| 5 | 10:30 | 12,81 | 300 | 6,86 | 270 | 2,85 | -36 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 30A / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 10:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]m bToC = m Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677524 |

| Well Details | |
|---|---|
| Well No. | GWM179A |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 5,58 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (GV=VM*WC) | ca 100 |

| Purging Information | |
|---|---|
| 3fr Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 10 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:15 | 5,58 | start | — | — | — | — | / | — | schwach | wolkig / ohne |
| 2 | 12:20 | 6,50 | 50 | 6,86 | 331 | 4,10 | -21 | / | 11,7 | schwach | wolkig / ohne |
| 3 | 12:30 | 6,50 | 100 | 6,91 | 336 | 4,60 | -24 | / | 11,8 | schwach | wolkig / ohne |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM179A / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 12:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +4° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| Pegel leergepumpt (nach 5 min)<br>5 min Wiederanstieg, danach nochmals 5 min Pumpzeit, dann PN |

*VM=[π*(d*10^-3/2)^2]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHM 184 |
| Project Number | 2482 1624 |

| Well Details | |
|---|---|
| Well ID | GWM 7BB |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 16,82 |
| Volume per Meter (l/m) (VpM) | / |
| Static Water Level (m uTOC) (SWL) | 12,43 |
| Water Column (m) (TWD - SWL) | / |
| Aquifer Thickness (m) (SWL - Aquifer Bot) | 700 |

| Purging Information | |
|---|---|
| Min Purge Volume (3 * 2xBV) | |
| Pumping Time (min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m uTOC) | 15,00 |
| Date | 04.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

## Field Parameters

| Ind. | Time (HH:mm) | Water Level (m uTOC) | Volume removed (l) | Measured Parameters: pH | EC* (µS/cm) | DO* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Foam / Layer / Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:45 | 12,47 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:50 | 13,08 | 50 | 6,75 | 334 | 2,80 | -29 | / | 11,6 | klar | farblos / ohne |
| 3 | 13:55 | 13,21 | 100 | 6,72 | 348 | 2,95 | -26 | / | 11,6 | klar | farblos / ohne |
| 4 | 14:05 | 13,25 | 200 | 6,69 | 347 | 3,15 | -28 | / | 11,7 | klar | farblos / ohne |
| 5 | 14:15 | 13,28 | 300 | 6,68 | 345 | 3,20 | -31 | / | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM7BB / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 14:15 | Sampled by | [redacted] |
| Preservation | 4°C (see Sample labels and/or CoC document) | | |
| Weather | kalt, trocken | Air Temperature | +9 |
| Preservation | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Color, etc.)

## Notes

[redacted]

*Variable to be measured, ref. to Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | ECAN HQ |
| Project Number | 2407782A |

| Well Details | |
|---|---|
| Well No. | GWM 78A |
| Location | Bismarck Reserve Kaiserhook |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | / |
| Casing Diameter (mm) (CD): | / |
| Total Well Depth (m) (MD) | |
| Volume per Meter (l/m) (Vol') | / |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (MD-SWL) | / |
| Aquifer thickness (m) (Thickness) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 04.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Further Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 11,45 | start | 6,99 | 423 | 41,40 | -27 | — | 10,8 | clear | Tumbler Volume |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78A / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | mostly | Air Temperature | +30 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

¹Vol=π*(r*100)²/1000, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 194 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,56 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 05.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +4° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RWS und Endtiefe gemessen

*Vol.=[π*(½*BD)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 194 |
| Project Number | 24677524 |

| Well Details | |
|---|---|
| Well No. | GWM172 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC[1]) (SWL) | 11,01 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (BV=VM'WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 05.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 13:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 8° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] m bToC = meter below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SOLAR NRW |
| Project Number | 2407 7624 |

| Well Details | |
|---|---|
| Well ID | GWM 71 |
| Location | Bismarck Kasence Kaverbrunn |
| Coordinates | — |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm; inch) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VPM) | / |
| Static Water Level (m u.TOC) (SWL) | 10,66 |
| Water Column (m) (WC= WD-SWL) | / |
| Purge Volume (l) (3-5xWV) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (3-5xWV) | — |
| Purging Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m u.TOC) | 20,00 |
| Date | 04.11.24 |
| Duration of Purging (min) | 30 |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m u.TOC) | Volume removed (l) | Measured Parameters: pH | EC[1] (µS/cm) | DO[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Color / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:30 | 10,66 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:35 | 10,91 | 50 | 6,98 | 261 | 2,90 | -19 | / | 11,6 | klar | farblos / ohne |
| 3 | 11:40 | 10,99 | 100 | 6,71 | 244 | 3,10 | -16 | / | 11,5 | klar | farblos / ohne |
| 4 | 11:50 | 11,03 | 200 | 6,66 | 246 | 3,15 | -11 | / | 11,5 | klar | farblos / ohne |
| 5 | 12:00 | 11,05 | 300 | 6,67 | 250 | 3,25 | -12 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 12:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | heiter | Air Temperature | +6° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Color, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

[1] Electrical Conductivity, [2] Dissolved Oxygen, [3] Ag/AgCl-Electrode, [4] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SOAK HH |
| Project Number | 2467024 |

| Well Details | |
|---|---|
| Well ID | GWM70 |
| Operator | Bernard Kasera Kavishe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | / |
| Casing Diameter (mm) (CD): | / |
| Total Well Depth (m) (WD): | 24,70 (GOK) |
| Volume per Meter (l/m) (VPM): | / |
| Static Water Level (m bTOC) (SWL): | — |
| Water Column (m) (WC=WD-SWL): | / |
| Adjusted purge rate (l) (3x1 - 5x1 WC): | / |

| Purging information | |
|---|---|
| Min Purge Volume (1 x WC) | — |
| Purging flow rate (l/min) | — |
| Purge duration | — |
| Pump Intake Depth (m bTOC) | — |
| Date | 04.11.24 |
| Sequence of Purging Utility | — |
| Purged by | [redacted] |

Well Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC) | Volume removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Field Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:00 | 15,85 | — | 7,00 | | 4,45 | -27 | — | 11,6 | klar | farblos/ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +3° |
| Parameter | a. CoC | | |
| Container | a. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Odour, etc.)

Notes

[redacted]

[1] Weight of Sulfur [2] Below Top of Casing, Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kattenbahn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 7,91 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | - |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 14,00 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:30 | 7,91 | start | - | - | - | - | / | - | klar | farblos / ohne |
| 2 | 11:35 | 8,21 | 50 | 6,81 | 380 | 4,35 | -47 | / | 10,8 | klar | farblos / ohne |
| 3 | 11:40 | 8,46 | 100 | 6,84 | 368 | 4,25 | -44 | / | 11,6 | klar | farblos / ohne |
| 4 | 11:50 | 8,59 | 200 | 6,81 | 375 | 3,95 | -37 | / | 11,7 | klar | farblos / ohne |
| 5 | 12:00 | 8,65 | 300 | 6,82 | 381 | 3,90 | -34 | / | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 40 / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +4° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(0,5*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHM Kbl. |
| Project Number | 2407 1624 |

| Well Details | |
|---|---|
| Well ID | GWM39 |
| Location | Bismarck Kaserne Kornthal |
| Coordinates | — |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm) (DB): | / |
| Casing Diameter (mm) (CD): | / |
| Total Well Depth (m) (TWD): | 15,82 |
| Volume per Meter (dm³/m): | / |
| Static Water Level (m uTOC) (SWL): | 5,38 |
| Water Column (m) (TWD - SWL = WC): | / |
| Maximum Purge (l) (3 x WC x VPM): | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (3 x SWV): | — |
| Pumping Rate (l/min): | 10 |
| Purge Method: | SQ3 |
| Pump Intake Depth (m u TOC): | 15,00 |
| Date: | 04.11.24 |
| Duration of Purging (min): | 30 |
| Purged by: | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m uTOC) | Volume removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:00 | 5,38 | start | — | — | — | — | / | — | schwach | farblos / ohne |
| 2 | 13:05 | 5,55 | 50 | 6,78 | 295 | 3,75 | -28 | / | 11,0 | klar | farblos / ohne |
| 3 | 13:10 | 5,60 | 100 | 6,79 | 302 | 3,45 | -29 | / | 11,4 | klar | farblos / ohne |
| 4 | 13:20 | 5,62 | 200 | 6,81 | 303 | 3,20 | -22 | / | 11,5 | klar | farblos / ohne |
| 5 | 13:30 | 5,64 | 300 | 6,80 | 306 | 3,00 | -21 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 13:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 8° |
| Preservation | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

Notes

[redacted]

¹Micro-siemens/cm, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAM VIA |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kottenbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 9,76 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 05.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | trocken | | | | | ~ | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 12:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

*VM=[m²]=π*[BD²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHM Yin |
| Project Number | 2467 7629 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Kirchheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m uTOC) (SWL) | — |
| Water Column (m) (TWD−SWL) | / |
| Pumping rate (l/min) (Q) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (3xCSV) | — |
| Pumping Rate (l/min) | — |
| Purge Started | — |
| Pump Intake Depth (m uTOC) | — |
| Date | 04.11.24 |
| Duration of Purging (min) | — |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m uTOC) | Volume Removed (l) | Measured Parameters: pH | EC¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox (mV) | Water Temp. (°C) | Turbidity | Purge Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | 23,25 | — | 7,09 | 364 | 4,45 | −30 | — | 11,7 | trüb | braun/oliv |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM37 / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 10:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +3° |
| Preservation | s. CoC | | |
| Container | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

¹Water Level (m) Below Top of Casing, ²Electrolytic Conductivity, ³Dissolved Oxygen, ⁴Ag/AgCl-Electrode, ⁵Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM 92 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 13,37 |
| Water Column (m) (WC=WD-SWL) | / |
| Approxvolumen (l) (BV=VM*WC) | 100 |

| Purging Information | |
|---|---|
| 10h Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:15 | 13,37 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 9:20 | 13,72 | 50 | 6,64 | 405 | 4,80 | -22 | / | 11,2 | klar | farblos / ohne |
| 3 | 9:25 | 13,98 | 100 | 6,71 | 404 | 4,95 | -24 | / | 11,5 | schwach | rosa / ohne |
| 4 | 9:35 | 14,21 | 200 | 6,75 | 406 | 4,90 | -23 | / | 11,6 | schwach | rosa / ohne |
| 5 | 9:45 | 14,30 | 300 | 6,71 | 406 | 4,85 | -24 | / | 11,6 | schwach | rosa / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM92A / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(½*BD)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | [illegible] |
| Project Number | [illegible] |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Kerpen |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (Vol/) | / |
| Static Water Level (m bTOC) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Volume (l) (3 x WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (1-2 EV) | — |
| Pumping Rate (l/min) | — |
| Purge Started | — |
| Pump Intake Depth (m bTOC) | — |
| Date | 04.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC) | Volume Removed (l) | Measured Parameters: pH | E.C.* (mS/cm) | D.O.* (mg/L) | Redox* (mV) | Temp.* (°C) | Water Temp (°C) | Turbidity | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | 5,35 | — | 6,78 | 776 | 4,40 | -26 | / | 11,8 | klar | farblos / klar |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM91 / 04.11.24 | Sampling Method | Peristaltic Pump |
| Sampling Date & Time | 04.11.24 / 10:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | + 3° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Values in italics (e.g. *pH*) Before Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCM 90 |
| Project Number | 2407 7624 |

| Well Details | |
|---|---|
| Well ID | GWM 90 |
| Location | Bismarck Reserve Kleinbrink |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm; ID) | / |
| Casing Diameter (mm; ID) | / |
| Total Well Depth (m) (TWD) | 8,00 (GOK) |
| Volume per Meter (l/m) (Vol/) | / |
| Static Water Level (m [TOC]) (SWL) | / |
| Water Column (m) (WC; WCL SWL) | / |
| Volume (m³) (L) (Vol/WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (1 x Vol/WC) | — |
| Purging Supervisor | — |
| Purge Method | — |
| Pump Intake Depth (m [TOC]) | — |
| Date | 04.11.24 |
| Completion of Sampling (date) | — |
| Purged by | [redacted] |

## Field Parameters

| Well | Time (HH:mm) | Water Level (m [TOC]) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:55 | 7,90 | — | — | — | — | — | / | — | — | — / — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Samples Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sehr kalt | Air Temperature | +3° |
| Preservative | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

Notes

PN nicht möglich

[redacted]

*Water Parameters (pH, Redox, Temp, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl Electrode, Redox Potential after Correction)

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCM Kbr. |
| Project Number | 2402 7624 |

| Well Details | |
|---|---|
| Well ID: | GWM89 |
| Location: | Bismarck Kaserne Kamenz |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm; HDI): | / |
| Casing Diameter (mm; CD): | / |
| Total Well Depth (m) (WD): | 8,00 (GOK) |
| Volume per Meter (l/m) (VMP): | / |
| Static Water Level (m bTOC) (SWL): | / |
| Water Column (m) (WC= WD-SWL): | / |
| Approximate Water (l) (3*1*VMP): | / |

| Purging information | |
|---|---|
| Min Purge Volume (1-3xBV): | — |
| Purging Rate (l/min): | — |
| Purge Method: | — |
| Pump Intake Depth (m bTOC): | — |
| Date: | 04.11.24 |
| Duration of Purging (min): | — |
| Purged by: | [redacted] |

## Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC) | Volume removed (l) | Measured Parameters: pH | EC [1] (µS/cm) | DO [2] (mg/L) | Redox [3] (mV) | Redox [4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | — | — | — | — | — | — | / | — | — | — / — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +10 |
| Preservation | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

Notes

Meßstelle trocken

[redacted]

[1] Values Reported Will Include Type of Correction, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCH Nr. 16h |
| Project Number | 2401 16.h |

| Well Details | |
|---|---|
| Well ID | GWM 88 |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (TWD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VPM) | / |
| Static Water Level (m bToC) (SWL) | — |
| Water Column (m) (TWD - SWL) (WC) | / |
| Approximate Volume (l) (3 * WC * VPM) | — |

| Pumping Information | |
|---|---|
| Min Purge Volume (l) (3 x VPM) | — |
| Pumping Rate (l/min) | — |
| Purge Started | — |
| Pump Intake Depth (m bToC) | — |
| Date | 04.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 7,01 | - | 6,86 | 507 | 4,95 | -15 | — | 11,4 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 88 / 04.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wechselhaft | Air Temperature | +3° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*Volatile Hydrocarbons, **Below Top of Casing, ***Electrolytic Conductivity, ****Dissolved Oxygen, *****Ag/AgCl Electrode, ******Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | SCHMH Nh |
| Project Number | 2402 7624 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm) (DB) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bTOC) (SWL) | — |
| Water Column (m) (WC: WD-SWL) | — |
| Volume (l) (V: WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (1-3xV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bTOC) | — |
| Date | 04.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

Field Parameters

| Ref | Time (HH:mm) | Water Level (m bTOC) | Volume Removed (l) | Measured Parameters: pH | EC[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[3] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:25 | — | — | — | — | — | — | — | — | — | — / — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 / 9:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +3° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

Notes

Meßstelle trocken

[redacted]

[1] Electrical Conductivity, [2] Dissolved Oxygen, [3] Ag/AgCl-Electrode, [4] Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | [illegible] |
| Project Number | [illegible] |

| Well Details | |
|---|---|
| Well ID | GWM 86 |
| Location | Denmark Kasserne Kaserngrk |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (Vol) | — |
| Static Water Level (m bTOC) (SWL) | — |
| Water Column (m) (WD-WD SWL) | — |
| Measuring Point (MP) (TOC/GOK) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (1 x Vol) | — |
| Purge Duration (min) | — |
| Purge Method | — |
| Pump Intake Depth (m bTOC) | — |
| Date | 04.11.24 |
| Commenced Purging (time) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol | Time (HH:mm) | Water Level (m bTOC) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox (mV) | Water Temp (°C) | Turbidity | Farbe Klarheit |
| 1 | 9:30 | 7,71 | — | — | — | — | — | / | — | — | — / — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 04.11.24 9:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | nebly | Air Temperature | +7° |
| Parameter | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

## Notes

keine PN möglich

[redacted]

*Volatile Organics (VOC), Below Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl Electrode, Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM85A |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,63 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 8,87 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 16,00 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:45 | 8,87 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 10:50 | 9,05 | 50 | 6,72 | 430 | 4,30 | -45 | / | 10,6 | klar | farblos / ohne |
| 3 | 10:55 | 9,16 | 100 | 6,82 | 416 | 4,05 | -46 | / | 11,1 | klar | farblos / ohne |
| 4 | 11:05 | 9,24 | 200 | 6,87 | 410 | 4,15 | -42 | / | 11,4 | klar | farblos / ohne |
| 5 | 11:15 | 9,30 | 300 | 6,79 | 406 | 4,10 | -47 | / | 11,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM85A / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 11:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | nicht reg | Air Temperature | +7° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 24B |
| Location | Bismarck Kaserne Kaiserbahn |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,66 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 15,07 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:15 | 15,05 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:20 | 17,39 | 50 | 6,71 | 263 | 3,85 | -13 | / | 11,2 | klar | farblos / ohne |
| 3 | 15:25 | 16,34 | 100 | 6,65 | 264 | 3,25 | -19 | / | 11,3 | klar | farblos / ohne |
| 4 | 15:35 | 17,25 | 200 | 6,55 | 265 | 2,85 | -21 | / | 11,3 | klar | farblos / ohne |
| 5 | 15:45 | 16,89 | 300 | 6,58 | 266 | 2,90 | -20 | / | 11,41 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 24B / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 15:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ± 0 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(½*BD/1000)²]*1000. *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 02 A |
| Location | Bismarck Kaserne Kaffeebar |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 17,33 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 13,61 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 17,50 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 12:30 | 13,61 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 12:35 | 13,96 | 50 | 6,74 | 180 | 3,86 | -44 | / | 10,6 | klar | farblos / ohne |
| 3 | 12:40 | 14,15 | 100 | 6,78 | 177 | 3,82 | -42 | / | 11,0 | schwach | trüb / ohne |
| 4 | 12:50 | 14,36 | 200 | 6,80 | 174 | 3,94 | -42 | / | 11,3 | schwach | trüb / ohne |
| 5 | 13:00 | 14,46 | 300 | 6,81 | 179 | 3,96 | -41 | / | 11,4 | schwach | trüb / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 02 A / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 13:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +4°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[(r²)*3,07]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Kutterbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 03.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 5,11 (POK) | — | 7,01 | 295 | 3,12 | -31 | — | 10,1 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM91 / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 9:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

GOK - POK 1,80 m

[redacted]

[1]VM=ln²(ø*80)*3/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Bismarck Kaserne Kattenbrook |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Aquifervolumen (l) (GV=VM*WC) | — |

| Purging Information | |
|---|---|
| 1fch Purge Volume (l) (~2xGV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 03.11.24 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | — | | | |
| 3 | | | | | | | | — | | | |
| 4 | | | | | | | | — | | | |
| 5 | | | | | | | | — | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 9:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Meßstelle trocken

[redacted]

[1]VM=[π*(CD/2)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GKM89 |
| Location | Bismarck Kaserne Kattenbarh |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| 3fr. Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 03.11.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:25 | leer | / | / | / | / | / | / | / | / | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 9:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=[π*(r²)*1000]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Kaiserbogen |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 03.11.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 7,00 | / | 7,02 | 478 | 4,25 | -22 | / | 11,2 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 9:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*VM=[π*(d/2)²*100], *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM87 |
| Location | Bismarck Kaserne Kaiserbahn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GWM) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Aboutpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 03.12.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | leer | / | / | / | / | / | / | / | / | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | / | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 9:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Meßstelle trocken

[redacted]

[1]VM=[π*(r/100)²]*1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

| | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24577824 |

| | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck Kaserne Kaltenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (VM') | |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (SV=VM'*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC*) | |
| Date | 03.12.24 |
| Duration of Pumping (min) | |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:05 | leer | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 9:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=ln(½*BD)²/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 85 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Wate: Level (m bToC[2]) (SWL) | 9,33 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 16,00 |
| Date | 05.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:10 | 9,33 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:15 | 9,52 | 50 | 6,71 | 367 | 3,85 | -12 | / | 11,3 | klar | farblos / ohne |
| 3 | 11:20 | 9,63 | 100 | 6,70 | 364 | 3,91 | -16 | / | 11,5 | klar | farblos / ohne |
| 4 | 11:30 | 9,70 | 200 | 6,81 | 361 | 3,94 | -17 | / | 11,5 | klar | farblos / ohne |
| 5 | 11:40 | 9,75 | 300 | 6,82 | 357 | 3,91 | -20 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 85 A / 05.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.12.24 / 11:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 4°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 84 B |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,08 |
| Volume per Meter (l/m) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | 15,33 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (IV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 22,00 |
| Date | 03.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp (°C) | Turbidity | Färbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:40 | 15,33 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 14:45 | 17,62 | 50 | 6,86 | 242 | 2,95 | -25 | / | 10,2 | klar | farblos / ohne |
| 3 | 14:50 | 18,49 | 100 | 6,82 | 244 | 3,06 | -27 | / | 10,3 | klar | farblos / ohne |
| 4 | 15:00 | 18,86 | 200 | 6,75 | 245 | 3,08 | -20 | / | 10,3 | klar | farblos / ohne |
| 5 | 15:10 | 19,02 | 300 | 6,71 | 248 | 3,08 | -16 | / | 10,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 84 B / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sunny | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=Inn(½*60)²/100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM84A |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | 11,23 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 18,00 |
| Date | 03.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp. (°C) | Turbidity | Färbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:55 | 11,23 | start | — | — | — | — | / | — | klar | farblos / klar |
| 2 | 14:00 | 11,72 | 50 | 6,85 | 240 | 2,86 | -21 | / | 9,3 | klar | farblos / klar |
| 3 | 14:05 | 13,06 | 100 | 6,72 | 244 | 2,91 | -22 | / | 9,8 | klar | farblos / klar |
| 4 | 14:15 | 13,30 | 200 | 6,75 | 240 | 2,95 | -21 | / | 9,9 | klar | farblos / klar |
| 5 | 14:25 | 13,45 | 300 | 6,69 | 239 | 3,05 | -21 | / | 10,0 | klar | farblos / klar |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM84A / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 14:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=[π*(½*BD)²]/100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Keseme Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 20,73 |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC*) (SWL) | 14,21 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM'*WC) | 300 |

| Purging Information | |
|---|---|
| 15h Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 03.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Unit | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | 14,21 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 10:15 | 14,39 | 50 | 6,92 | 294 | 3,86 | -23 | / | 10,1 | klar | farblos / ohne |
| 3 | 10:20 | 14,44 | 100 | 6,88 | 291 | 3,91 | -13 | / | 10,2 | klar | farblos / ohne |
| 4 | 10:30 | 14,46 | 200 | 6,89 | 291 | 3,94 | -20 | / | 10,2 | klar | farblos / ohne |
| 5 | 10:40 | 14,47 | 300 | 6,90 | 287 | 3,95 | -19 | / | 10,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 10:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*Vazdin(%=80/8/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 164 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM 84 A |
| Location | Bernardt Kesseme Kattenbarth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 10,27 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 13,50 |
| Date | 03.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:40 | 10,27 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:45 | 10,51 | 50 | 6,69 | 248 | 3,05 | -11 | / | 9,8 | klar | farblos / ohne |
| 3 | 11:50 | 10,73 | 100 | 6,68 | 250 | 3,11 | -11 | / | 10,6 | schwach | rötlich / ohne |
| 4 | 11:00 | 11,05 | 200 | 6,70 | 247 | 3,14 | -11 | / | 10,4 | schwach | rötlich / ohne |
| 5 | 12:10 | 11,16 | 300 | 6,71 | 249 | 3,26 | -12 | / | 10,6 | schwach | rötlich / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 71 / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 12:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[1]VM=[r²(h)*π]*1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAR 104 |
| Project Number | 24677874 |

| Well Details | |
|---|---|
| Well No. | GWM 301 |
| Location | Bismarck Kaserne Kofferbord |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 12,67 |
| Water Column (m) (WC=WD-SWL) | / |
| Approx.volumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 15h Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | CQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 05.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:15 | 12,67 | start | — | — | — | — | / | — | schwach | trüb / ohne |
| 2 | 13:20 | 13,27 | 50 | 6,88 | 264 | 2,84 | -38 | / | 10,2 | klar | farblos / ohne |
| 3 | 13:35 | 13,30 | 100 | 6,85 | 250 | 2,23 | -27 | / | 10,3 | klar | farblos / ohne |
| 4 | 13:45 | 13,33 | 200 | 6,82 | 246 | 2,86 | -24 | / | 10,3 | klar | farblos / ohne |
| 5 | 13:55 | 13,35 | 300 | 6,76 | 246 | 2,91 | -25 | / | 10,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 301 / 05.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.11.24 / 13:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +4° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(BD/2)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GKM79A |
| Location | Bernardo Kaserne Kofferbord |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,67 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 03.11.24 |
| Duration of Pumping (min) | ca. 20 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30 | 5,67 | min | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:20 | 6,50 | 50 | 6,92 | 272 | 4,04 | -23 | / | 13,6 | rötlich | schwach / ohne |
| 3 | 15:30 | 6,50 | 100 | 6,94 | 287 | 4,11 | -28 | / | 13,6 | rötlich | schwach / ohne |
| 4 | 15:40 | 6,50 | 150 | 6,99 | 2841 | 4,26 | -32 | / | 13,6 | rötlich | schwach / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GKM79A / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 15:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 3x leergepumpt, dann PN

*VM=[π*(CD/2)²-BD²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 78 B |
| Location | Bismarck Kaserne Ketterberg |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 12,61 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 3Dh Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 03.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:10 | 12,61 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:15 | 13,24 | 50 | 7,19 | 303 | 4,05 | -9 | / | 10,2 | klar | farblos / ohne |
| 3 | 13:20 | 13,37 | 100 | 6,91 | 310 | 3,82 | -11 | / | 10,3 | klar | farblos / ohne |
| 4 | 13:30 | 13,41 | 200 | 6,84 | 312 | 3,61 | -18 | / | 10,3 | klar | farblos / ohne |
| 5 | 13:40 | 13,42 | 300 | 6,78 | 315 | 3,46 | -20 | / | 10,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78 B / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 13:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*VM=[r²x3,1416x1000] *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM78A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 13,23 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Approx.volumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 03.11.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:40 | 12,50 | start | 7,06 | 377 | 2,65 | -16 | / | 12,2 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78A / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 9:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperatura | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(d/2)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24627824 |

| Well Details | |
|---|---|
| Well No. | GWM 73 |
| Location | Bismarck Kaserne Kaltenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,27 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,65 |
| Water Column (m) (WC=WD-SWL) | / |
| Approximate Volume (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 03.12.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 15:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*Vm=(π*(0.0508/2)²)*1000. *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Kattenbank |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 11,15 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC) (SWL) | 11,33 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC) | / |
| Date | 03.12.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol | Time (hh:mm) | Water Level (m bToC) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 11:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| nur Ruhe und Endtiefe gemessen |

[redacted]

[3]VM=[π*(½*BD)²]/1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Kaserne Kohlstadt |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 11,50 |
| Water Column (m) (WC=WD-SWL) | / |
| Nopumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 03.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:55 | 11,50 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 11:00 | 11,73 | 50 | 6,81 | 224 | 2,85 | -11 | / | 10,1 | klar | farblos / ohne |
| 3 | 11:05 | 11,79 | 100 | 6,80 | 222 | 2,88 | -6 | / | 10,3 | klar | farblos / ohne |
| 4 | 11:15 | 11,85 | 200 | 6,77 | 227 | 2,90 | +1 | / | 10,3 | klar | farblos / ohne |
| 5 | 11:25 | 11,87 | 300 | 6,74 | 229 | 2,941 | +2 | / | 10,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 11:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | ± 5 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(D/1000)²]/4*100. *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,70 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (V=VM*WC) | / |

| Purging Information | |
|---|---|
| 10h Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 03.12.24 |
| Duration of Purging (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:00 | 16,24 | / | 6,71 | 252 | 4,96 | -17 | / | 11,3 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 70 / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 9:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | 15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1]VM=(π*(D/2)²*100), [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (Lm) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 8,21 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 05.12.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:55 | 8,21 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:00 | 8,46 | 50 | 6,60 | 344 | 3,86 | -16 | / | 10,7 | klar | farblos / ohne |
| 3 | 15:05 | 8,66 | 100 | 6,74 | 341 | 3,68 | -12 | / | 10,7 | klar | farblos / ohne |
| 4 | 15:15 | 8,76 | 200 | 6,73 | 336 | 3,66 | -15 | / | 10,7 | klar | farblos / ohne |
| 5 | 15:25 | 8,81 | 300 | 6,71 | 331 | 3,54 | -19 | / | 10,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 40 / 05.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 05.12.24 / 15:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +4° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(D/2)²)/1000, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,48 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquavolumen (l) (AV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xAV) | - |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 03.11.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:25 | 5,48 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 12:30 | 5,63 | 50 | 6,95 | 257 | 4,10 | -16 | / | 11,5 | klar | farblos / ohne |
| 3 | 12:35 | 5,69 | 100 | 6,86 | 255 | 3,98 | -15 | / | 11,3 | klar | farblos / ohne |
| 4 | 12:45 | 5,73 | 200 | 6,82 | 244 | 3,91 | -14 | / | 11,3 | klar | farblos / ohne |
| 5 | 12:55 | 5,74 | 300 | 6,83 | 253 | 3,75 | -14 | / | 11,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 39 / 03.11.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.11.24 / 12:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ± 5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*VM=[(r1²-r2²)*pi]/1000, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kufferbarth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 10,21 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 03.12.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 12:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Conny | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RWS und Endtiefe gemessen

*VM=(r²*π*100), *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Kaiserbahn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WD-SWL) | / |
| Aquifer volumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| 10h Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 03.12.24 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Bemerk |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:05 | 23,76 | / | 7,03 | 331 | 5,54 | -22 | / | 10,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM37 / 03.12.24 | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.12.24 / 10:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | +5° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Kutterbord |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:40 | 12,13 | start | 6,89 | 296 | 4,45 | 69 | / | 9,4 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM37 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 10:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

*VM=[π*(ID/2/100)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 38 |
| Location | Bismarck Kaserne Kattenbahn |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | 11,06 |
| Water Column (m) (WC=WD-SWL) | / |
| Aboutvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| 3-5x Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC²) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 11:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 21 |
| Weather | | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur NaS und Endtiefe gemessen

[redacted]

¹Volume [(π*(BD/2)²)/1000], ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,26 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:00 | 5,26 | start | — | — | — | — | / | | klar | farblos / ohne |
| 2 | 11:05 | 5,42 | 50 | 6,86 | 236 | 3,82 | 60 | / | | klar | farblos / ohne |
| 3 | 11:20 | 5,49 | 100 | 6,81 | 258 | 3,86 | 56 | / | | klar | farblos / ohne |
| 4 | 11:20 | 5,53 | 200 | 6,80 | 265 | 3,79 | 57 | / | | klar | farblos / ohne |
| 5 | 11:30 | 5,56 | 300 | 6,81 | 267 | 3,69 | 54 | / | | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 11:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | RT |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM39 / 13.01.25
QA / QC

*VM=[π*(BD/1000)²/4]*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM40 |
| Location | Bismarck Kaserne Kaiserbord |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 8,04 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 14.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:00 | 8,04 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:05 | 8,27 | 50 | 6,75 | 386 | 3,09 | 56 | — | 11,4 | klar | farblos / ohne |
| 3 | 15:10 | 8,56 | 100 | 6,80 | 364 | 3,54 | 61 | — | 11,2 | klar | farblos / ohne |
| 4 | 15:20 | 8,65 | 200 | 6,79 | 362 | 3,52 | 64 | — | 11,1 | klar | farblos / ohne |
| 5 | 15:30 | 8,71 | 300 | 6,77 | 358 | 3,42 | 60 | — | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 14.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 / 15:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM40 14.01.25
QA/QC

[redacted]

*VM=[π*(d/2)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | ECAN 104 |
| Project Number | 24677524 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Kattenbarh |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,71 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (RV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 17,01 | start | 6,08 | 789 | 5,10 | 40 | — | 10,5 | klar | farblos / ohne |
| 2 | | | | | | | | — | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 70 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD/1000)²]*100, [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Kaserne Kalkberg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 11,98 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1Sr Purge Volume (l) (~2xSV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:30 | 11,86 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:35 | 12,09 | 50 | 6,92 | 267 | 3,32 | 86 | / | 12,3 | klar | farblos / ohne |
| 3 | 13:40 | 12,14 | 100 | 6,86 | 291 | 3,34 | 82 | / | 12,2 | klar | farblos / ohne |
| 4 | 13:50 | 12,19 | 200 | 6,84 | 286 | 3,16 | 69 | / | 12,2 | klar | farblos / ohne |
| 5 | 14:00 | 12,22 | 300 | 6,83 | 289 | 3,12 | 63 | / | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 14:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

+ Probe GWM71 / 13.01.25
QA/QC

*Vor-Ort (z.B. 90°/100), *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246777824 |

| Well Details | |
|---|---|
| Well No. | GKM72 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC*) (SWL) | 12,01 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM'*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | - |
| Pumping Rate (l/min) | - |
| Purge Method | - |
| Pump Intake Depth (m bToC*) | - |
| Date | 13.01.25 |
| Duration of Pumping (min) | - |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | | | start | | | | | - | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 11:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | ✓ |
| Weather | bedeckt | Air Temperature | +7° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RKS und Endtiefe gemessen

*VM=[π*(½*BD)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,31 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,50 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifer-volumen (l) (AV=VM*WC) | — |

| Purging Information | |
|---|---|
| 3Dr Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 14.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 12:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*VM=[m²]x*80%*100. *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM73A |
| Location | Bismarck Kaserne Kaltenbrunn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | / |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abstandsvolumen (l) (SV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | 12,52 | stan | 6,67 | 321 | 3,02 | 71 | — | 7,3 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM73A / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 9:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(r/100)²*100]. *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM78B |
| Location | Bismarck Kesselhaus Kattenturm |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 13,18 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (AV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:50 | 13,18 | start | — | — | — | — | / | — | klar | farblos / klar |
| 2 | 11:55 | 13,75 | 50 | 6,82 | 299 | 3,96 | 77 | / | 10,3 | klar | farblos / klar |
| 3 | 12:00 | 13,84 | 100 | 6,81 | 305 | 3,6 | 66 | / | 10,3 | klar | farblos / klar |
| 4 | 12:10 | 13,88 | 200 | 6,79 | 301 | 3,61 | 62 | / | 10,1 | klar | farblos / klar |
| 5 | 12:20 | 13,89 | 300 | 6,80 | 296 | 3,52 | 58 | / | 10,1 | klar | farblos / klar |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78B / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 12:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1]VM=(m²)*B0²*3/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM79A |
| Location | Bismarck Kaserne Kattenbard |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | |
| Volume per Meter (Lm) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 5,68 |
| Water Column (m) (WC=WD-SWL) | / |
| Approx. volumes (l) (SV=VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xSV) | — |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 6,50 |
| Date | 14.01.25 |
| Duration of Pumping (min) | ca 20 |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:45 | 5,68 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:55 | 6,50 | 50 | 6,71 | 321 | 4,05 | 46 | / | 12,5 | klar | farblos / ohne |
| 3 | 12:05 | 6,50 | 100 | 6,89 | 346 | 4,01 | 42 | / | 12,4 | klar | farblos / ohne |
| 4 | 12:15 | 6,50 | 150 | 6,88 | 336 | 3,96 | 40 | / | 12,4 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM79A 14.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 / 12:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | neblig | Air Temperature | ca 2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Pegel 3x leergepumpt, dann PN

[redacted]

[1]VM=[m²]*[80²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl Electrode, [6]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 30A |
| Location | Bismarck Kaserne Kaiserbarth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 13,07 |
| Water Column (m) (WC=WD-SWL) | / |
| Approx.volumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 14.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:20 | 13,07 | start | — | — | — | — | / | | klar | farblos / ohne |
| 2 | 13:25 | 13,42 | 50 | 6,86 | 281 | 3,06 | 46 | / | 11,3 | klar | farblos / ohne |
| 3 | 13:30 | 13,55 | 100 | 6,89 | 299 | 2,99 | 51 | / | 11,1 | klar | farblos / ohne |
| 4 | 13:40 | 13,57 | 200 | 6,86 | 298 | 2,97 | 50 | / | 10,9 | klar | farblos / ohne |
| 5 | 13:50 | 13,59 | 300 | 6,87 | 201 | 2,95 | 52 | / | 10,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 30A / 14.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 / 13:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | wolkig | Air Temperature | +2 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

Notes

[redacted]

*VM=[m²]*[60]/[100], *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677834 |

| Well Details | |
|---|---|
| Well No. | GWM37A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM*) | / |
| Static Wate: Level (m bToC*) (SWL) | 10,60 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:45 | 10,60 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 12:50 | 10,32 | 50 | 6,84 | 306 | 4,02 | 81 | / | 9,5 | klar | farblos / ohne |
| 3 | 12:55 | 10,99 | 100 | 6,82 | 341 | 3,96 | 73 | / | 10,4 | klar | farblos / ohne |
| 4 | 13:05 | 11,28 | 200 | 6,79 | 339 | 3,84 | 67 | / | 10,4 | klar | farblos / ohne |
| 5 | 12:15 | 11,39 | 300 | 6,78 | 336 | 3,63 | 60 | / | 10,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37A / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 13:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[m²]x[3011/100. *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 82A |
| Location | Bismarck Kaserne Ratterbord |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 14,75 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox¹ (mV) | Redox² (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:15 | 14,75 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 14:20 | 14,91 | 50 | 6,81 | 306 | 4,61 | 84 | / | 10,1 | klar | farblos / ohne |
| 3 | 14:25 | 14,95 | 100 | 6,79 | 302 | 3,86 | 84 | / | 10,3 | klar | farblos / ohne |
| 4 | 14:35 | 14,98 | 200 | 6,78 | 301 | 3,84 | 78 | / | 10,2 | klar | farblos / ohne |
| 5 | 14:45 | 14,99 | 300 | 6,78 | 301 | 3,80 | 76 | / | 10,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 14:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*Vol=[m³/s*60]*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, ¹Ag/AgCl-Electrode, ²Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM84A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 11,64 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 3fn Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,00 |
| Date | 13.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:00 | 11,64 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:05 | 12,09 | 50 | 7,04 | 301 | 3,42 | 80 | / | 10,3 | klar | farblos / ohne |
| 3 | 15:10 | 12,31 | 100 | 6,86 | 312 | 3,31 | 76 | / | 10,1 | klar | farblos / ohne |
| 4 | 15:20 | 12,49 | 200 | 6,76 | 321 | 3,21 | 72 | / | 10,0 | klar | farblos / ohne |
| 5 | 15:30 | 12,62 | 300 | 6,75 | 319 | 3,17 | 66 | / | 10,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM84A / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Data & Time | 13.01.25 / 15:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[m²]:*80*3/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM 84 B |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,66 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 15,33 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1Sh Purge Volume (l) (~2xBV) | ← |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 13.01.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:45 | 15,33 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:50 | 16,24 | 50 | 6,88 | 256 | 2,60 | 67 | / | 10,2 | klar | farblos / ohne |
| 3 | 15:55 | 16,99 | 100 | 6,81 | 248 | 2,69 | 66 | / | 10,1 | klar | farblos / ohne |
| 4 | 16:05 | 17,39 | 200 | 6,78 | 242 | 2,66 | 62 | / | 10,1 | klar | farblos / ohne |
| 5 | 16:15 | 17,44 | 300 | 6,74 | 239 | 2,51 | 59 | / | 10,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 84B1 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 16:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 101 |
| Weather | bedeckt | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[(π*(BD/1000)²)/4]*1000, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCAH 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM35A |
| Location | Bismarck Kaserne Kelterberg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC[1]) (SWL) | 9,57 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (l=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1fn Purge Volume (l) (~2xBV) | 2 |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 18,00 |
| Date | 14.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:10 | 9,57 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:15 | 9,71 | 50 | 6,60 | 329 | 3,95 | 51 | / | 11,2 | klar | farblos / ohne |
| 3 | 11:20 | 9,79 | 100 | 6,80 | 341 | 3,85 | 54 | / | 11,1 | klar | farblos / ohne |
| 4 | 11:30 | 9,85 | 200 | 6,84 | 344 | 3,81 | 48 | / | 11,1 | klar | farblos / ohne |
| 5 | 11:40 | 9,89 | 300 | 6,82 | 356 | 3,79 | 49 | / | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM35A / 14.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 / 11:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | wolkig | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]Vol=[m³]=ID²*π/4*100, [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck Kaserne Kaiserbahn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Wate: Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | — |

| Purging Information | |
|---|---|
| 1fach Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:40 | 6,85 | stan | 7,01 | 305 | 4,01 | 68 | — | 10,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM86 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 9:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*VM=[π*(r/1*10^3)^2]*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 191 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM87 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 3,00 (40cm) |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (WC*VM'*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 2,16 | ca. | 6,84 | 316 | 3,68 | 65 | — | 7,1 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | — | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM87 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 9:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(s*60)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM88 |
| Location | Bismarck Kaserne Kaiserbord |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM') | / |
| Static Wate: Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SVx VM'xWC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 7,14 | min | 6,78 | 388 | 501 | 67 | — | 12,4 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM88 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 10:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | bedeckt | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(d/2)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAM 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kasserne Kaltenbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 6,00 (GWM |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC*) | |
| Date | |
| Duration of Pumping (min) | |
| Purged by | [redacted] |

## Field Parameters

| Well | Time (hr:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:05 | Leer | trocken | — | — | — | — | / | — | — | — — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 10:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Messstelle trocken

[redacted]

*VM=[(r²)*π*1000]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM 90 |
| Location | Bismarck Kaserne Kaiserbarth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (IV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xIV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Unit | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:15 | 7,39 | ca. | 6,78 | 278 | 4,91 | 68 | — | 7,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 90 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 13:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

*VM=[m²]x*PD²/4/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM21 |
| Location | Bismarck Kaserne Kaffeberg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (Lm) (VM) | / |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 13.01.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Nr. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | 3,74 (PVA) | start | 6,92 | 361 | 4,26 | 71 | — | 11,7 | klar | farblos / GOH |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM21 / 13.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 13.01.25 / 10:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Select | Air Temperature | +3° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

*VM=[m²]*800²/100, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OLAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM92A |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (dm) (VM*) | / |
| Static Wate: Level (m bToC*) (SWL) | 13,95 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 14.01.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:30 | 13,95 | start | / | — | — | — | / | / | klar | farblos / ohne |
| 2 | 12:35 | 14,21 | 50 | 6,82 | 202 | 3,42 | 66 | / | 11,5 | klar | farblos / ohne |
| 3 | 12:40 | 14,41 | 100 | 6,81 | 175 | 3,46 | 61 | / | 11,3 | klar | farblos / ohne |
| 4 | 12:50 | 14,59 | 200 | 6,86 | 187 | 3,51 | 49 | / | 11,3 | klar | farblos / ohne |
| 5 | 13:00 | 14,69 | 300 | 6,87 | 194 | 3,52 | 52 | / | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC.# | | | |
|---|---|---|---|
| Sample Name | GWM92A / 14.01.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 14.01.25 / | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | ~2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[m³/s*60]*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Bismarck Kaserne Ketterburg |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 12.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:00 | 24,16 | min | 6,32 | 412 | 4,51 | 26 | / | 10,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 / 11:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | Niederschlag | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*Vol=[π*(½*ID)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM36 |
| Location | Bismarck Kaserne Kaiserbad |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,35 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 11,22 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 11.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | - | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 14:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

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[redacted]

*VM=[π*(BD/2*100)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,08 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:10 | 5,08 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:15 | 5,22 | 50 | 6,68 | 312 | 3,65 | 18 | / | 10,5 | klar | farblos / ohne |
| 3 | 11:20 | 5,29 | 100 | 6,74 | 308 | 3,61 | 16 | / | 11,1 | klar | farblos / ohne |
| 4 | 11:30 | 5,36 | 200 | 6,75 | 307 | 3,58 | 15 | / | 11,2 | klar | farblos / ohne |
| 5 | 11:40 | 5,38 | 300 | 6,77 | 306 | 3,52 | 12 | / | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 11:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | 11 +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM39 / 11.02.25
QA/QC

[redacted]

*VM=[π*(CD*10)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM40 |
| Location | Bismarck Kaserne Kaiserbahn |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 7,97 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpump-volumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 11,00 |
| Date | 12.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:05 | 7,97 | start | | | | | / | 11,0 | klar | farblos / ohne |
| 2 | 12:10 | 8,19 | 50 | 6,38 | 412 | 4,32 | 56 | / | 11,1 | klar | farblos / ohne |
| 3 | 12:15 | 8,37 | 100 | 6,66 | 403 | 3,99 | 51 | / | 11,5 | klar | farblos / ohne |
| 4 | 12:25 | 8,48 | 200 | 6,66 | 382 | 3,87 | 48 | / | 11,5 | klar | farblos / ohne |
| 5 | 12:35 | 8,56 | 300 | 6,66 | 369 | 3,85 | 48 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 12.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 / 12:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | Niesel Regen | Air Temperature | + 2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM40 / 12.02.25
QA / QC

*VM=[π*(s*60)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,71 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Approx. volumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | |
| Date | 12.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Well | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | 16,74 | wasn | 6,71 | 701 | 3,35 | 31 | / | 10,4 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 70 / 12.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 9:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Nieselregen | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*(r=CD/2/100)²*100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Keserne Kufferbarh |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | / |
| Static Wate: Level (m bToC[1]) (SWL) | 11,68 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1Bh Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 20,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 11,68 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 9:50 | 11,91 | 50 | 6,41 | 602 | 3,21 | 88 | / | 11,3 | klar | farblos / ohne |
| 3 | 9:55 | 11,99 | 100 | 6,64 | 502 | 3,02 | 61 | / | 10,8 | klar | farblos / ohne |
| 4 | 10:05 | 12,04 | 200 | 6,66 | 409 | 3,58 | 54 | / | 10,6 | klar | farblos / ohne |
| 5 | 10:15 | 12,07 | 300 | 6,69 | 408 | 3,55 | 52 | / | 10,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 10:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 2x1 |
| Weather | bedeckt | Air Temperature | +2 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM71 / 11.02.25
QA / QC

[redacted]

[1]VM=(π*(r)²*100)/100, [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677804 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM¹) | / |
| Static Water Level (m bToC²) (SWL) | 11,99 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (SV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | – |
| Pumping Rate (l/min) | – |
| Purge Method | – |
| Pump Intake Depth (m bToC²) | – |
| Date | 11.02.25 |
| Duration of Pumping (min) | – |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp (°C) | Turbidity | Farbe Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 11:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +20 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Ruh und Endtiefe gemessen

[redacted]

¹VM=[π*(BD/2*100)²]/100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Kaffeberg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,26 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | — |

| Purging Information | |
|---|---|
| 3fach Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 11.02.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | start | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 11:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RWS und Endtiefe gemessen

[redacted]

*VM=[π*(BD/2*100)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GEM704 |
| Location | Bismarck Kaserne Kofferbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (dm) (VM) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 11.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:20 | leer | start | — | — | — | — | / | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 10:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | Mittelregen | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Messstelle trocken

[redacted]

*VM=(π*(r)²*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GWM78B |
| Location | Bismarck Kaserne Kufferbarth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,22 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 13,08 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 15,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:00 | 13,08 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:05 | 13,55 | 50 | 6,62 | 502 | 4,61 | 16 | — | 12,2 | klar | farblos / ohne |
| 3 | 12:10 | 13,68 | 100 | 6,68 | 455 | 4,02 | 12 | — | 10,3 | klar | farblos / ohne |
| 4 | 12:20 | 13,74 | 200 | 6,74 | 453 | 3,81 | 16 | — | 10,4 | klar | farblos / ohne |
| 5 | 12:30 | 13,75 | 300 | 6,77 | 438 | 3,78 | 17 | — | 10,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78B / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 12:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1]VM=[π*(CD/2)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM79A |
| Location | Bismarck Kesselhaus Kalfortbank |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 5,50 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | ca. 150 |

| Purging Information | |
|---|---|
| 1Sh Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 11.02.25 |
| Duration of Pumping (min) | ca 20 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:25 | 5,50 | start | — | — | — | — | / | — | schwach | bräunlich / ohne |
| 2 | 11:35 | 6,50 | 50 | 6,98 | 351 | 3,25 | 6 | / | 11,5 | schwach | bräunlich / ohne |
| 3 | 11:45 | 6,50 | 100 | 6,99 | 362 | 3,90 | 12 | / | 11,4 | schwach | bräunlich / ohne |
| 4 | 11:55 | 6,50 | 150 | 6,97 | 348 | 3,96 | 17 | / | 11,4 | schwach | bräunlich / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM79A / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 11:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | Ref |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 3x leergepumpt, dann PN

[redacted]

*VM=[π*(BD²-CD²)/4]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM30A |
| Location | Bismarck Kaserne Kaltenkirchen |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 13,14 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:55 | 13,11 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 16:00 | 13,61 | 50 | 6,81 | 351 | 3,50 | 21 | / | 10,7 | klar | farblos / ohne |
| 3 | 16:05 | 13,69 | 100 | 6,72 | 336 | 3,42 | 24 | / | 10,9 | klar | farblos / ohne |
| 4 | 16:15 | 13,71 | 200 | 6,70 | 324 | 3,38 | 26 | / | 11,0 | klar | farblos / ohne |
| 5 | 16:25 | 13,73 | 300 | 6,67 | 322 | 3,35 | 26 | / | 11,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM30A / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 16:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(BD/2*100)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 811 |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 10,46 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 11.02.24 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | 10,46 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 10:30 | 10,72 | 50 | 6,44 | 423 | 3,62 | 26 | / | 9,3 | klar | farblos / ohne |
| 3 | 10:35 | 10,90 | 100 | 6,56 | 406 | 3,40 | 22 | / | 10,2 | schwach | bräunlich / ohne |
| 4 | 10:45 | 11,26 | 200 | 6,59 | 401 | 3,36 | 16 | / | 10,3 | schwach | bräunlich / ohne |
| 5 | 10:55 | 11,36 | 300 | 6,60 | 399 | 3,32 | 12 | / | 10,4 | schwach | bräunlich / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 811 / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 10:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(BD/2*100)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Kaiserbad |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Wate: Level (m bToC[2]) (SWL) | 14,57 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquavolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1fin Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC) | 20,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:00 | 14,57 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 9:05 | 14,78 | 50 | 6,81 | 381 | 4,55 | 44 | / | 11,3 | klar | farblos / ohne |
| 3 | 9:10 | 14,80 | 100 | 6,85 | 402 | 4,21 | 21 | / | 11,8 | klar | farblos / ohne |
| 4 | 9:20 | 14,81 | 200 | 6,83 | 407 | 4,06 | 12 | / | 11,8 | klar | farblos / ohne |
| 5 | 9:30 | 14,82 | 300 | 6,84 | 406 | 3,95 | 4 | / | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 9:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~1 +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 311 |
| Location | Bismarck Kaserne Kaiserbank |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 11,44 |
| Water Column (m) (WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 18,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 12:55 | 11,44 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:00 | 12,31 | 50 | 6,58 | 644 | 3,50 | 12 | / | 10,6 | klar | farblos / ohne |
| 3 | 13:05 | 13,22 | 100 | 6,68 | 597 | 3,42 | 16 | / | 11,0 | klar | farblos / ohne |
| 4 | 13:15 | 13,40 | 240 | 6,74 | 551 | 3,40 | 15 | / | 11,0 | klar | farblos / ohne |
| 5 | 13:25 | 13,46 | 300 | 6,78 | 549 | 3,37 | 12 | / | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 311 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 13:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=(π*(BD²-CD²))/4000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM84B |
| Location | Bismarck Kaserne Kaffeburg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,66 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 14,74 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:40 | 14,74 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:45 | 17,05 | 50 | 6,86 | 351 | 4,05 | 35 | / | 9,5 | klar | farblos / ohne |
| 3 | 13:50 | 17,91 | 100 | 6,91 | 351 | 3,81 | 27 | / | 10,6 | klar | farblos / ohne |
| 4 | 14:00 | 18:35 | 200 | 6,94 | 352 | 3,75 | 42 | / | 10,7 | klar | farblos / ohne |
| 5 | 14:10 | 18,52 | 300 | 6,92 | 305 | 3,72 | 41 | / | 10,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM84B / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 14:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | ~ 2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[(r²)*π*100], *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 35A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 3,44 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 16,00 |
| Date | 12.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 11:20 | 9,44 | start | 6,75 | 412 | 4,15 | 24 | / | 11,2 | klar | farblos / ohne |
| 2 | 11:25 | 9,69 | 50 | 6,68 | 399 | 4,26 | 26 | / | 11,5 | klar | farblos / ohne |
| 3 | 11:30 | 9,73 | 100 | 6,66 | 392 | 4,11 | 16 | / | 11,5 | klar | farblos / ohne |
| 4 | 11:40 | 9,87 | 200 | 6,64 | 391 | 4,06 | 17 | / | 11,6 | klar | farblos / ohne |
| 5 | 11:50 | 9,84 | 300 | 6,58 | 390 | 3,98 | 14 | / | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 35A / 12.02.25 | Sampling Method | Pump Sample |
| Sampling Data & Time | 12.02.25 / 11:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Dieselregen | Air Temperature | 11 / +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*V=n*(pi)*(BD²/4)*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 86 |
| Location | Bismarck Keserne Kotterbarh |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (40K) |
| Volume per Meter (Ltr) (VM') | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (1V=VM'WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 11.02.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | leer | trüb | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 10:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Dielelvegen | Air Temperature | + 2°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*Vol=[m³]=ID²*π/4/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Bismarck Kaserne Kattenbarh |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Aquifer volumen (l) (SV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Aligned | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 12.01.24 |
| Duration of Pumping (min) | |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (uS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:15 | leer | leer | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.01.25 / 10:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Niederregen | Air Temperature | + 2 °C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

*VM=(r²*π*1000), *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM88 |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | — |
| Date | 12.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 10:10 | 7,15 | start | 6,84 | 561 | 4,86 | -1 | / | 9,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM88 / 12.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 / 10:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | Niesel regen | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(d/2)²*1000]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677524 |

| Well Details | |
|---|---|
| Well No. | GKM'89 |
| Location | Bismarck Kaserne Kofferbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 12.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:55 | leer | start | / | / | / | / | / | / | / | / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | — | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 / 9:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Niederregen | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

[1]VM=(r²)*3,1*1000, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Bismarck Keserne Kaffeberg |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | / |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 12.02.25 |
| Duration of Pumping (min) | — |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:45 | 7,41 | klar | 6,71 | 521 | 4,62 | 16 | — | 3,4 | klar | farblos / ohne |
| 2 | | | | | | | | — | | | |
| 3 | | | | | | | | — | | | |
| 4 | | | | | | | | — | | | |
| 5 | | | | | | | | — | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM90 / 12.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 12.02.25 / 10:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | Niederschlag | Air Temperature | +20 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[r²*π*1000], [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 101 |
| Project Number | 24577824 |

| Well Details | |
|---|---|
| Well No. | GWM91 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (IV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xIV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 11.02.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 5,23 (AM) | start | 6,99 | 361 | 1,06 | 26 | / | 9,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM91 / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | Niederschlag | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677524 |

| Well Details | |
|---|---|
| Well No. | GWM92A |
| Location | Bismarck Kesselne Kattenbahn |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 13,90 |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (SV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 11.02.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:10 | 13,90 | start | — | — | — | — | / | — | klar | farblos |
| 2 | 15:15 | 14,22 | 50 | 6,75 | 254 | 3,95 | 10 | / | 10,9 | klar | farblos |
| 3 | 15:20 | 14,39 | 100 | 6,76 | 255 | 3,96 | 11 | / | 11,5 | klar | farblos |
| 4 | 15:30 | 14,59 | 200 | 6,78 | 251 | 4,09 | 14 | / | 11,5 | klar | farblos |
| 5 | 15:40 | 14,67 | 300 | 6,75 | 249 | 4,04 | 14 | / | 11,5 | klar | farblos |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM92A / 11.02.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.02.25 / 15:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | bedeckt | Air Temperature | +2° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(r)²*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:05 | 23,93 | stan | 6,78 | 604 | 4,76 | 31 | / | 10,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM37 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 11:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | ~ 15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(½*BD/1000)²]*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kaiserbarr |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM) | / |
| Static Wate: Level (m bToC*) (SWL) | 11,26 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 11:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | sonnig | Air Temperature | +16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RWS und Endtiefe gemessen

[redacted]

*VM=[π*(CD/2*100)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | YOCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 4,73 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (RV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xRV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:45 | 4,73 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:50 | 4,89 | 50 | 6,76 | 355 | 4,05 | 21 | / | 12,4 | klar | farblos / ohne |
| 3 | 13:55 | 4,95 | 100 | 6,77 | 341 | 3,89 | 24 | / | 12,0 | klar | farblos / ohne |
| 4 | 14:05 | 4,99 | 200 | 6,75 | 329 | 3,90 | 24 | / | 11,9 | klar | farblos / ohne |
| 5 | 14:15 | 5,01 | 300 | 6,75 | 338 | 3,85 | 22 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Data & Time | 10.03.25 / 14:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | ✓ |
| Weather | wolkig | Air Temperature | +16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*CD)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM40 |
| Location | Bismarck Kaserne Kutterbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 8,82 |
| Water Column (m) (WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 11.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:20 | 8,82 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 15:25 | 9,01 | 50 | 6,62 | 706 | 5,06 | 50 | / | 12,5 | klar | farblos / ohne |
| 3 | 15:30 | 9,17 | 100 | 6,66 | 672 | 4,26 | 61 | / | 11,8 | klar | farblos / ohne |
| 4 | 15:40 | 9,29 | 200 | 6,71 | 581 | 4,18 | 58 | / | 11,7 | klar | farblos / ohne |
| 5 | 15:50 | 9,75 | 300 | 6,70 | 569 | 4,07 | 56 | / | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM40 / 11.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.03.25 / | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +3 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| + Probe GWM40 / 11.03.25<br>QA/QC |

*VM=[π*(0,01*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM70 |
| Location | Bismarck Kaserne Kutterbarh |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 16,45 | start | 6,92 | 576 | 5,041 | 63 | / | 11,7 | klar | farblos/ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Data & Time | 10.03.25 / 9:45 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 13 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[r²*(3,1415)*1000]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM171 |
| Location | Bismarck Kaserne Kattenbarl |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 11,37 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:10 | 11,37 | start | — | — | — | — | / | — | klar | farblos/ohne |
| 2 | 12:15 | 11,67 | 50 | 6,76 | 582 | 4,06 | 52 | / | 12,0 | klar | farblos/ohne |
| 3 | 12:20 | 11,77 | 100 | 6,71 | 526 | 3,89 | 54 | / | 11,2 | klar | farblos / ohne |
| 4 | 12:30 | 11,73 | 200 | 6,69 | 521 | 3,91 | 52 | / | 11,8 | klar | farblos/ohne |
| 5 | 12:40 | 11,75 | 300 | 6,69 | 501 | 3,90 | 52 | / | 11,7 | klar | farblos/ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM171 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 12:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | N |
| Weather | wolkig | Air Temperature | +15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*VM=π*(r=(BD-CD)/100)²*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM72 |
| Location | Bismarck Kaserne Kottenland |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diampter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 11,78 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 14:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | sonnig | Air Temperature | + 16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Rks und Endtiefe gemessen

[redacted]

[1]VM=[π*(r²)*1000]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM') | / |
| Static Water Level (m bToC*) (SWL) | 4,99 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM'*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.¹ (µS/cm) | D.O.² (mg/L) | Redox³ (mV) | Redox⁴ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 17:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | sonnig | Air Temperature | +14 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

nur RW's und Endtiefe gemessen

[redacted]

*Vid=[m]/π*50²)/100, *Below Top of Casing, ¹Electrolytic Conductivity, ²Dissolved Oxygen, ³Ag/AgCl-Electrode, ⁴Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM78A |
| Location | Bismarck Kesselhe Kaltenbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | / |
| Volume per Meter (l/m) (VM) | / |
| Static Wate: Level (m bToC[1]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[1]) | / |
| Date | 10.07.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:50 | 12,43 | start | 6,66 | 589 | 4,46 | 47 | / | 9,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78A / 10.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.07.25 / 10:50 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | wolkig | Air Temperature | + 15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(r/100)²*100], [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 73B |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 12,91 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 15h Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:35 | 12,91 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 11:40 | 13,29 | 50 | 6,73 | 398 | 3,99 | 27 | / | 11,7 | klar | farblos / ohne |
| 3 | 11:45 | 13:45 | 100 | 6,75 | 399 | 3,84 | 33 | / | 11,6 | klar | farblos / ohne |
| 4 | 11:50 | 13:51 | 200 | 6,71 | 402 | 3,81 | 36 | / | 11,6 | klar | farblos / ohne |
| 5 | 15:05 | 13:53 | 300 | 6,70 | 412 | 3,70 | 36 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 73B / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Data & Time | 10.03.25 / 15:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(0,5*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 79 A |
| Location | Bismarck Kaserne Kutterbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 5,26 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 10.03.25 |
| Duration of Pumping (min) | ca 20 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:00 | 5,26 | start | — | — | — | — | — | — | schwach | bräunlich / ohne |
| 2 | 17:10 | 6,50 | 50 | 6,89 | 675 | 4,06 | 40 | — | 12,1 | schwach | bräunlich / ohne |
| 3 | 17:20 | 6,50 | 100 | 6,91 | 644 | 3,99 | 36 | — | 12,1 | klar | farblos / ohne |
| 4 | 17:30 | 6,50 | 150 | 6,92 | 621 | 3,97 | 36 | — | 12,0 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 79 A / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 17:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 3x leergepumpt, dann PN

*VM=[π*(r²)*1000]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 304 |
| Location | Bismarck Kaserne Kaltorbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 114,63 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 13,10 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 150 |

| Purging Information | |
|---|---|
| 1fch Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 114,00 |
| Date | 11.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:45 | 13,10 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 13:50 | 13,46 | 25 | 6,76 | 4164 | 3,82 | 59 | / | 12,3 | klar | farblos / ohne |
| 3 | 13:55 | 13,52 | 50 | 6,77 | 4181 | 3,61 | 57 | / | 11,7 | klar | farblos / ohne |
| 4 | 14:00 | 13,54 | 100 | 6,74 | 4176 | 3,58 | 59 | / | 11,6 | klar | farblos / ohne |
| 5 | 14:15 | 13,56 | 150 | 6,71 | 4177 | 3,56 | 50 | / | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 304 / 11.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.03.25 / 14:15 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | windig | Air Temperature | +8 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=lπ*(r²*1000)/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWMB-1A |
| Location | Bismarck Kaserne Kutterbank |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 10,20 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1/3rt Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 13,50 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Pecameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 12:55 | 10,20 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:00 | 10,78 | 50 | 6,59 | 4021 | 3,74 | 53 | / | 12,2 | klar | farblos / ohne |
| 3 | 13:05 | 10,96 | 100 | 6,64 | 4026 | 3,91 | 53 | / | 12,3 | schwach | trüb / ohne |
| 4 | 13:15 | 11,12 | 200 | 6,63 | 4031 | 3,92 | 53 | / | 12,4 | schwach | trüb / ohne |
| 5 | 13:25 | 11,25 | 300 | 6,67 | 4026 | 3,95 | 53 | / | 12,4 | schwach | trüb / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | GWMB1A / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 13:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 21 |
| Weather | wolkig | Air Temperature | + 15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Kufstein |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | 14,22 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (l=VM*WC) | 400 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol.* | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:25 | 14,22 | start | — | — | — | — | / | - | klar | farblos / ohne |
| 2 | 11:30 | 14,47 | 50 | 6,86 | 551 | 5,01 | 410 | / | 12,1 | klar | farblos / ohne |
| 3 | 11:35 | 14,50 | 100 | 6,87 | 522 | 4,82 | 411 | / | 12,1 | klar | farblos / ohne |
| 4 | 11:45 | 14,51 | 200 | 6,79 | 499 | 4,40 | 40 | / | 12,1 | klar | farblos / ohne |
| 5 | 11:55 | 14,52 | 300 | 6,80 | 486 | 4,36 | 42 | / | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 11:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=$\pi$*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 94A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC²) (SWL) | 11,22 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 15h Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC²) | 18,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC²) | Volume Removed (l) | Measured Parameters: pH | E.C.³ (µS/cm) | D.O.⁴ (mg/L) | Redox⁵ (mV) | Redox⁶ (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10 | 11,22 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 16:15 | 12,65 | 50 | 6,62 | 4181 | 3,76 | 412 | / | 11,6 | klar | farblos / ohne |
| 3 | 16:20 | 12,90 | 100 | 6,69 | 4183 | 3,78 | 411 | / | 11,6 | klar | farblos / ohne |
| 4 | 16:30 | 13,09 | 200 | 6,71 | 4185 | 3,39 | 416 | / | 11,5 | klar | farblos / ohne |
| 5 | 16:40 | 13,17 | 300 | 6,74 | 4186 | 3,35 | 417 | / | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 94A / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 16:40 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | 2H |
| Weather | wolkig | Air Temperature | +14 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

¹VM=[π*(½*BD)²]*100, ²Below Top of Casing, ³Electrolytic Conductivity, ⁴Dissolved Oxygen, ⁵Ag/AgCl-Electrode, ⁶Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAR 101 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 8413 |
| Location | Bismarck Kaserne Kotherbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 25,66 |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | 15,42 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 22,00 |
| Date | 10.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 15:25 | 15,42 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 15:30 | 17,55 | 50 | 6,91 | 402 | 4,20 | 27 | / | 11,3 | klar | farblos / ohne |
| 3 | 15:35 | 16,41 | 100 | 6,89 | 391 | 4,06 | 30 | / | 11,2 | klar | farblos / ohne |
| 4 | 15:45 | 16,77 | 200 | 6,88 | 376 | 4,01 | 32 | / | 11,2 | klar | farblos / ohne |
| 5 | 15:55 | 16,92 | 300 | 6,85 | 371 | 3,89 | 33 | / | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 8413 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 15:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=[π*(d/2*10)²]/1000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | GUAH 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kaserne Kutterbank |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC) (SWL) | 9,12 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| 1fach Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC) | 18,00 |
| Date | 11.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. [°C] | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:30 | 9,12 | start | / | / | / | / | / | / | klar | farblos / ohne |
| 2 | 14:35 | 9,35 | 50 | 6,69 | 906 | 5,07 | 53 | / | 12,4 | klar | farblos / ohne |
| 3 | 14:40 | 9,46 | 100 | 6,66 | 704 | 4,62 | 54 | / | 12,9 | klar | farblos / ohne |
| 4 | 14:50 | 9,57 | 200 | 6,69 | 701 | 4,59 | 56 | / | 12,6 | klar | farblos / ohne |
| 5 | 15:00 | 9,60 | 300 | 6,64 | 698 | 4,51 | 56 | / | 12,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 85A / 11.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.03.25 / 15:00 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +8 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

[1] VM=[π*(d/2*10^-3)^2]*1000, [2] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 101 |
| Project Number | 24877824 |

| Well Details | |
|---|---|
| Well No. | GWM 36 |
| Location | Bernardc Kaserne Kaltenbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Aquifervolumen (l) (AV=VM*WC) | / |

| Purging Information | |
|---|---|
| 1fch Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 10.07.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:35 | 7,24 | start | 6,78 | 579 | 4,84 | 35 | / | 9,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 36 / 10.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.07.25 / 10:35 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | windig | Air Temperature | +14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

[1]VM=[m²]x[80]²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM87 |
| Location | Bismarck Kaserne Kattenpoth |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 3,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | / |
| Static Water Level (m bToC[2]) (SWL) | |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC[2]) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

## Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 10:25 | leer | trocken | — | — | — | — | / | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 10:25 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +1°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

## Notes

Meßstelle trocken

[redacted]

[1]VM=[π*(r/1000)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM88 |
| Location | Bismarck Kesselte Kattenbard |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:20 | 7,26 | leer | 6,79 | 674 | 5,26 | 42 | / | 10,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 10:20 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(r/1000)²]*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BVnVM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | Leer | leer | / | / | / | / | / | / | / | / |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 10:10 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +14 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677824 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | / |
| Volume per Meter (Lm) (VM') | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (SV=VM'*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

Field Parameters

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:05 | 7,40 | klar | 6,85 | 597 | 4,99 | 66 | / | 10,3 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM90 10.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 10:05 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | + 14 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

[redacted]

*Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677874 |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | / |
| Static Water Level (m bToC*) (SWL) | / |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | / |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | / |
| Pumping Rate (l/min) | / |
| Purge Method | / |
| Pump Intake Depth (m bToC*) | / |
| Date | 10.03.25 |
| Duration of Pumping (min) | / |
| Purged by | [redacted] |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:55 | 5,43 (GOK) | start | 6,72 | 585 | 5,09 | 35 | / | 9,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 91 / 10.0325 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.03.25 / 9:55 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +13 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(0,01)²)/100. *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 24677624 |

| Well Details | |
|---|---|
| Well No. | GWM92A |
| Location | Bismarck Kaserne Kutterbarn |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 13,78 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BVs=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | / |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 11.03.25 |
| Duration of Pumping (min) | 30 |
| Purged by | [redacted] |

**Field Parameters**

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:00 | 13,78 | start | — | — | — | — | / | — | klar | farblos / ohne |
| 2 | 13:05 | 14,09 | 50 | 6,81 | 811 | 3,21 | 65 | / | 11,9 | klar | farblos / ohne |
| 3 | 13:10 | 14,24 | 100 | 6,79 | 763 | 3,26 | 66 | / | 12,0 | klar | farblos / ohne |
| 4 | 13:20 | 14,40 | 200 | 6,76 | 758 | 3,31 | 64 | / | 12,0 | klar | farblos / ohne |
| 5 | 13:30 | 14,48 | 300 | 6,75 | 752 | 3,36 | 62 | / | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM92A / 11.03.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 11.03.25 / 13:30 | Sampled by | [redacted] |
| Preservation | 4°C (see sample labels and/or CoC document) | | / |
| Weather | wolkig | Air Temperature | +8 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*Vol.[m³/s*60]*1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Riemerts Kaserne Kellenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 24,76 (GOK) |
| Volume per Meter (litre) (VM) | — |
| Static Water Level (m b.ToC / m b.GOK) | — |
| Water Column (m) (WC: TWD - SWL) | — |
| Abpumpvolumen (l) (BV*VM*WC) | — |

| Pumping Information | |
|---|---|
| Min Purge Volume (l; 1-2xBV) | — |
| Pumping Rate (l/Min) | — |
| Purge Method | — |
| Pump Intake Depth (m b.ToC?) | — |
| Date | 10.04.25 |
| Duration of Pumping (min) | — |
| Pumped by | K.A. |

Field Parameters

| Vol | Time (24 h; hh:mm) | Water Level (m b.ToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Colour / Odour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:20 | 23,73 | Well | 6,91 | 761 | 3,87 | 64 | — | 11,8 | klar | farblos / geruchlos |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 37 / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC) | | |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*Mean Value, *Mean Value of Cleans, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,30 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 09.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (UTC) (hhmm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 11:55 | — | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 11:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

neue Res und Eimtiefe gemessen

[redacted]

[1] VM=(π*(ID/2)²)/1000, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 5,00 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 15,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:40 | 5,00 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:45 | 5,17 | 50 | 6,86 | 505 | 3,51 | 79 | — | 11,5 | klar | farblos / ohne |
| 3 | 11:50 | 5,23 | 100 | 6,81 | 501 | 3,21 | 76 | — | 11,5 | klar | farblos / ohne |
| 4 | 12:00 | 5,29 | 200 | 6,80 | 487 | 3,11 | 72 | — | 11,5 | klar | farblos / ohne |
| 5 | 12:10 | 5,33 | 300 | 6,79 | 482 | 3,06 | 71 | — | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM39 / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 12:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | wolkig | Air Temperature | 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

↳ Probe GWM39 / 09.04.25
QA / QC

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773624 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | |
| Static Water Level (m bToC*) (SWL) | 7,80 |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 10.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:25 | 7,80 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:30 | 8,04 | 50 | 6,88 | 813 | 3,56 | 75 | — | 11,9 | klar | farblos / ohne |
| 3 | 14:35 | 8,24 | 100 | 6,86 | 812 | 3,68 | 74 | — | 11,9 | klar | farblos / ohne |
| 4 | 14:45 | 8,33 | 200 | 6,84 | 815 | 3,72 | 74 | — | 11,9 | klar | farblos / ohne |
| 5 | 14:55 | 8,41 | 300 | 6,87 | 815 | 3,74 | 74 | — | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 40 / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 14:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

+ Probe GWM 40 / 10.04.25
QA/QC

*VM=π*(ID/2)²*100; *Below Top of Casing; *Electrolytic Conductivity; *Dissolved Oxygen; *Ag/AgCl-Electrode; *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name: | ODAN 104 |
| Project Number: | 246776624 |

| Well Details | |
|---|---|
| Well No.: | GWM 70 |
| Location: | Bismarck Kaserne Altbroich |
| Coordinates: | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD): | — |
| Casing Diameter (mm) (CD): | — |
| Total Well Depth (m) (TWD): | 24,71 (GOK) |
| Volume per Meter (l/m) (VM): | — |
| Static Water Level (m b (TOC*)) (SWL): | — |
| Water Column (m) (WC=WD-SWL): | — |
| Abpumpvolumen (l) (3V=3*VM*WC): | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3*3V): | — |
| Pumping Rate (l/min): | — |
| Purge Method: | — |
| Pump Intake Depth (m bToC*): | — |
| Date: | 10.04.25 |
| Duration of Pumping (min): | — |
| Purged by: | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | O.D.* (mg/L) | Redox* (mV) | Reopot* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 12:10 | 16,63 | start | 6,81 | 561 | 5,38 | 85 | — | 11,8 | klar | farblos/ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name: | GWM 70 / 10.04.25 | Sampling Method: | Pump Sample |
| Sampling Date & Time: | 10.04.25 / 12:10 | Sampled by: | K.A |
| Preservation: | (see sample labels and/or CoC document) | | |
| Weather: | sonnig | Air Temperature: | + 12° |
| Parameters: | s. CoC | | |
| Containers: | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Odor, etc.)

**Notes**

*Water Level (mBTOC), Below Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,43 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.* (mg/L) | Redox[2] (mV) | Redox[3] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:05 | 11,43 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 10:10 | 11,80 | 50 | 6,58 | 475 | 2,97 | 83 | — | 12,0 | klar | farblos / ohne |
| 3 | 10:15 | 11,86 | 100 | 6,57 | 461 | 2,81 | 82 | — | 12,0 | klar | farblos / ohne |
| 4 | 10:25 | 11,92 | 200 | 6,54 | 449 | 2,80 | 82 | — | 11,9 | klar | farblos/ ohne |
| 5 | 10:35 | 11,94 | 300 | 6,56 | 455 | 2,78 | 81 | — | 11,9 | klar | farblos/ ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM71 / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 10:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | sonnig | Air Temperature | 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM71/09.04.25
QA/QC

[redacted]

*) VM=π*(0,5*BD)²*100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,89 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 09.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:05 | — | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 12:05 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ~12 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RLS und Endtiefe gemessen

[redacted]

*VM=π*(½*BD)²/1000, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,21 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 5,16 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM'*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 09.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:05 | — | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 15:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RLS und Endtiefe gemessen

[redacted]

*VM=(π*(ID/2)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 1804 |
| Project Number | 216377824 |

| Well Details | |
|---|---|
| Well No. | GWM 78A |
| Location | Bismarck Kasoma Kabombwa |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m b ToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m b ToC*) | — |
| Date | 10.04.25 |
| Elevation of Sampling Point | — |
| Purged by | EA |

**Field Parameters**

| Vol | Time (24 h clock) | Water Level (m b ToC*) | Volume Removed (l) | Measured Parameters: pH | E.C. (µS/cm) | D.O. (mg/L) | Redox (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Colour / Odour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:55 | 11,52 | Max | 7,04 | 651 | 4,46 | 78 | – | 10,9 | klar | farblos / geruchlos |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM78A / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 11:55 | Sampled by | EA |
| Preservation | 4 °C (see sample labels and/or CoC document) | | Ice |
| Weather | sonnig | Air Temperature | +13° |
| Parameters | a. CoC | | |
| Containers | a. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

*Manjo'ji: Mujyitoli, Hexane, Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM78B |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,06 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:30 | 13,06 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:35 | 13,51 | 50 | 6,88 | 804 | 4,40 | 72 | — | 11,6 | klar | farblos / ohne |
| 3 | 12:40 | 13,62 | 100 | 6,81 | 808 | 4,34 | 70 | — | 11,6 | klar | farblos / ohne |
| 4 | 12:50 | 13,71 | 200 | 6,82 | 811 | 4,18 | 66 | — | 11,5 | klar | farblos / ohne |
| 5 | 13:00 | 13,72 | 300 | 6,81 | 812 | 4,12 | 64 | — | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78B / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 13:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | wolkig | Air Temperature | 11 / 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

*VM=(r²)x(3,1)=l/m, *bToC: Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 79A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 5,27 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 6,50 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
| 1 | 14:50 | 5,27 | start | — | — | — | — | — | — | schwach | bräunlich / ohne |
| 2 | 15:00 | 6,50 | 50 | 7,03 | 775 | 4,45 | 61 | — | 11,9 | schwach | bräunlich/ohne |
| 3 | 15:10 | 6,50 | 100 | 7,01 | 754 | 3,68 | 66 | — | 11,8 | schwach | bräunlich / ohne |
| 4 | 15:20 | 6,50 | 150 | 6,99 | 741 | 3,61 | 68 | — | 11,8 | schwach | bräunlich/ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 79A 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 15:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

[redacted]

[1] VM=π*(½*SD)²/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 801 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | 13,11 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 14,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:20 | 13,11 | start | — | — | — | — | — | — | schwach | bräunlich / klar |
| 2 | 16:25 | 13,65 | 50 | 6,79 | 511 | 4,25 | 72 | — | 11,7 | schwach | bräunlich / ohne |
| 3 | 16:30 | 13,67 | 100 | 6,73 | 506 | 4,20 | 71 | — | 11,9 | schwach | bräunlich / ohne |
| 4 | 16:40 | 13,69 | 200 | 6,75 | 502 | 4,17 | 74 | — | 12,0 | mittel | braun / ohne |
| 5 | 16:50 | 13,71 | 300 | 6,74 | 502 | 4,16 | 76 | — | 12,0 | mittel | braun / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 80A / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 16:50 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | RT |
| Weather | wolkig | Air Temperature | +15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(¼*BD)²/100, [1] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 81A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | / |
| Casing Diameter (mm) (CD) | / |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | / |
| Static Water Level (m bToC*) (SWL) | 10,26 |
| Water Column (m) (WC=WD-SWL) | / |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 10:50 | 10,26 | start | — | — | — | — | — | — | schwach | bräunlich / ohne |
| 2 | 10:55 | 10,54 | 50 | 6,40 | 468 | 3,18 | 85 | — | 11,5 | schwach | bräunlich / ohne |
| 3 | 11:00 | 10,74 | 100 | 6,48 | 475 | 2,92 | 86 | — | 11,6 | klar | farblos / ohne |
| 4 | 11:10 | 11,07 | 200 | 6,49 | 477 | 2,86 | 86 | — | 11,6 | klar | farblos / ohne |
| 5 | 11:20 | 11,18 | 300 | 6,51 | 483 | 2,81 | 86 | — | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 81A / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 11:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | 12 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(BD/2)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | 14,35 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 20,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:15 | 14,35 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 9:20 | 14,61 | 50 | 6,86 | 855 | 4,13 | 86 | — | 11,7 | klar | farblos / ohne |
| 3 | 9:25 | 14,64 | 100 | 6,82 | 821 | 4,12 | 86 | — | 11,8 | klar | farblos / ohne |
| 4 | 9:35 | 14,65 | 200 | 6,83 | 792 | 4,14 | 84 | — | 11,8 | klar | farblos / ohne |
| 5 | 9:45 | 14,65 | 300 | 6,84 | 788 | 4,16 | 83 | — | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 9:45 | Sampled by | K.A. |
| Preservation | 4° C (see sample labels and/or CoC document) | | MA |
| Weather | sonnig | Air Temperature | 10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=(π*(0,5*BD)²)*100, [1] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778124 |

| Well Details | |
|---|---|
| Well No. | GWM 84 A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,27 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:20 | 11,27 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:25 | 11,67 | 50 | 6,95 | 619 | 4,06 | 92 | — | 11,1 | klar | farblos / ohne |
| 3 | 13:35 | 12,96 | 100 | 6,90 | 606 | 4,16 | 93 | — | 11,2 | klar | farblos / ohne |
| 4 | 13:45 | 13,19 | 200 | 6,88 | 601 | 3,92 | 92 | — | 11,2 | klar | farblos / ohne |
| 5 | 13:55 | 13,26 | 300 | 6,84 | 594 | 3,86 | 93 | — | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM84A / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 13:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | 12 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(r*[X*SD]-[r*0]_*Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 84 B |
| Location | Bismarck Kaserne Kaiserlach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,68 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 15,55 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 22,00 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:05 | 15,55 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:10 | 17,60 | 50 | 7,06 | 672 | 3,94 | 92 | — | 10,7 | klar | farblos / ohne |
| 3 | 14:15 | 18,42 | 100 | 6,97 | 669 | 3,78 | 91 | — | 11,0 | klar | farblos / ohne |
| 4 | 14:25 | 18,81 | 200 | 6,93 | 664 | 3,72 | 94 | — | 11,0 | klar | farblos / ohne |
| 5 | 14:35 | 19,00 | 300 | 6,96 | 662 | 3,71 | 95 | — | 11,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84 B / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 14:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=[π*(½*BD)²]/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | 9,041 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM*3) | 300 |

| Purging information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump in/Lake Depth (m bToC[1]) | 18,00 |
| Time | 10.04.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:40 | 9,04 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:45 | 9,36 | 50 | 6,69 | 781 | 3,68 | 83 | — | 12,2 | klar | farblos / ohne |
| 3 | 13:50 | 9,45 | 100 | 6,64 | 794 | 3,66 | 86 | — | 12,1 | klar | farblos / ohne |
| 4 | 14:00 | 9,54 | 200 | 6,61 | 795 | 3,67 | 86 | — | 12,0 | klar | farblos / ohne |
| 5 | 14:10 | 9,55 | 300 | 6,59 | 797 | 3,641 | 86 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 85A / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 14:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Sonnig | Air Temperature | 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(ID/2)²]/1000, [1]Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246776224 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Rieserck Kasema Kelsterbach |
| Coordinates | |

| Well Specifications & Measurements | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volumes per Meter (l/m) (V/l) | — |
| Static Water Level (m b.TOC*) (SWL) | — |
| Water Column (m) (WC: WD-SWL) | — |
| Above Volumen (l) (SV: WC*V/l) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l: 3xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bTOC*) | — |
| Date | 10.04.25 |
| Duration of Purging (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (Uhrzeit) | Water Level (m b.TOC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox (mV) | Redox (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:50 | leer | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 12:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*Measured to Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential temp Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246776221 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Rennerod Kasserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (new) (BD) | — |
| Casing Diameter (new) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (liter) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (RV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xRV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 10.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C. (µS/cm) | D.O.* (mg/L) | Redox (mV) | Temp. (°C) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:45 | leer | min | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 12:45 | Sampled by | K.A. |
| Preservation | 4°C (wet weight labels and/or CoC numbers) | | — |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

*) Meter to GL, **) m.a.s.l., ***) Below Top of Casing, ****) Electrolytic Conductivity, *****) Dissolved Oxygen, ******) Ag/AgCl-Electrode, *******) Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 404 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM88 |
| Location | Rastatt Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (CCAN) |
| Volume per Meter (m³/m) (Vol.) | — |
| Static Water Level (m b.ToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3*1*WC/Vol.) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m b.ToC*) | — |
| Date | 10.04.25 |
| Duration of Pumping (min) | — |
| Planned by, | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m b.ToC*) | Volume Removed (l) | Measured Parameters: pH | E.C. (µS/cm) | O2 (mg/L) | Redox (mV) | Redox (mV) | Water Temp (°C) | Turbidity | Color / Odour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:35 | 7,20 | klar | 6,86 | 887 | 4,18 | 83 | — | 12,3 | klar | farblos / geruchlos |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 11:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | KA |
| Weather | | Air Temperature | +17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

*WM=(m²/D*3D=[m²/d], *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773241 |

| Well Details | |
|---|---|
| Well No. | GWM89 |
| Location | Rastatt Kasserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (COK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Aquifervolumen (l) (B)=(CD/2)²*π*WC | — |

| Purging Information | |
|---|---|
| Min. Purge Volume (l) (=3xB) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 10.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

## Field Parameters

| No. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measuring Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Oxidation* (mV) | Redox* (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 11:30 | Leer | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

## Sampling Information

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 11:30 | Transported by | K.A. |
| Preservation | 4°C (pure sample labels and/or CoC documents) | | leer |
| Weather | sonnig | Air Temperature | +13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.):

## Notes

Meßstelle trocken

*Within 1m of Bottom, Below Top of Casing, Electrolytic Conductivity, Dissolved Oxygen, Ag/AgCl-Electrode, Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 90 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Time | 10.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:05 | 7,33 | start | 6,85 | 778 | 3,96 | 82 | — | 9,7 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 90 / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 13:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | nil |
| Weather | sonnig | Air Temperature | +13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*[1] Mm³/h = (VM*SD)/1000, [2] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bTOC*) (sWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bTOC*) | — |
| Date | 10.04.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Colour / Odour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:20 | 5,39 (POK) | start | 7,06 | 538 | 4,25 | 85 | — | 9,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 91 / 10.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 10.04.25 / 11:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(¼*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 17,33 |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | 13,91 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 09.04.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35 | 13,91 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:40 | 14,19 | 50 | 6,94 | 1122 | 3,54 | 67 | — | 12,2 | klar | farblos / ohne |
| 3 | 15:45 | 14,38 | 100 | 6,87 | 878 | 3,41 | 64 | — | 12,2 | klar | farblos / ohne |
| 4 | 15:55 | 14,56 | 200 | 6,86 | 869 | 3,33 | 66 | — | 12,2 | klar | farblos / ohne |
| 5 | 16:05 | 14,64 | 300 | 6,82 | 842 | 3,28 | 65 | — | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 92A / 09.04.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.04.25 / 16:05 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +14° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

*VM=[π*(X*10)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[4]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[4]) | — |
| Date | 03.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (Uhrzeit) | Water Level (m bToC[4]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:05 | 23,29 | start | 6,78 | 882 | 4,06 | 412 | — | 11,3 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | GWM 37 / 06.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / 10:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(½*BD)²/100, [4] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,55 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,34 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Time | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:55 | — | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
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| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 12:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Rel. und Endtiefe gemessen

[redacted]

[1]VM=[π*(0,5*BD)²]/100, [2]below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,32 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,18 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (DV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:30 | 5,16 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:35 | 5,35 | 50 | 6,87 | 557 | 3,32 | 70 | — | 11,4 | klar | farblos / ohne |
| 3 | 12:40 | 5,40 | 100 | 6,79 | 566 | 3,29 | 66 | — | 11,5 | klar | farblos / ohne |
| 4 | 12:50 | 5,45 | 200 | 6,82 | 566 | 3,25 | 63 | — | 11,6 | klar | farblos / ohne |
| 5 | 13:00 | 5,46 | 300 | 6,83 | 575 | 3,27 | 61 | — | 11,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 13:00 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM39 / 08.05.25
QA / QC

[redacted]

*VM=π*(0,5*BD)²*1/100, *bToC: Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 410 |
| Location | Bismarck Kaserne Kelsterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 7,82 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:25 | 7,82 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:30 | 8,05 | 50 | 6,79 | 921 | 3,46 | 65 | — | 11,4 | klar | farblos / ohne |
| 3 | 13:35 | 8,21 | 100 | 6,82 | 932 | 3,42 | 64 | — | 11,6 | klar | farblos / ohne |
| 4 | 13:45 | 8,29 | 200 | 6,84 | 936 | 3,40 | 59 | — | 11,6 | klar | farblos / ohne |
| 5 | 13:55 | 8,37 | 300 | 6,82 | 941 | 3,41 | 60 | — | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sampler Name | GWM 410 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 410 / 08.05.25
QA / QC

[redacted]

*VM=[π*(0,5*SD)²]*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM70 |
| Location | Bismarck Kasoma Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC= WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (asl) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:00 | 16,34 | start | 6,31 | 776 | 4,12 | 60 | — | 11,5 | klar | farblos / klar |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 9:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 12° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(W*BD)²/4*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 11,51 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:05 | 11,51 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:10 | 11,93 | 50 | 6,62 | 420 | 2,441 | 66 | — | 12,4 | klar | farblos / ohne |
| 3 | 11:15 | 11,97 | 100 | 6,61 | 408 | 2,26 | 63 | — | 11,5 | klar | farblos / ohne |
| 4 | 11:25 | 12,07 | 200 | 6,64 | 402 | 2,24 | 68 | — | 11,4 | klar | farblos / ohne |
| 5 | 11:35 | 11,10 | 300 | 6,62 | 394 | 2,16 | 70 | — | 11,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 71 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 11:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 71 / 08.05.25
QA / QC

*VM=π*(X*BD)²/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM72 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurament | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 11,45 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,92 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:45 | — | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC documents) | | |
| Weather | | Air Temperature | |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*) VM=π*(D/2)²)/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 73 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (Vl/) | — |
| Static Water Level (m bToC*) (SWL) | 5,31 |
| Water Column (m) (WC= WD-SWL) | — |
| Abpumpvolumen (l) (BV=Vl/*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 03.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (µV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30 | — | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 03.05.25 / 15:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Ab's und Endtiefe gemessen

[redacted]

*VM=[π*(0,5*BD)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 78 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:45 | 12,40 | start | 6,92 | 889 | 4,26 | 59 | - | 10,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78 A / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 9:45 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +15 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(SD/2)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 7213 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | 16,82 |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (lm) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | 13,10 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 06.05.25 |
| Duration of Purging (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:15 | 13,10 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:20 | 13,57 | 50 | 6,82 | 862 | 4,21 | 53 | — | 12,1 | klar | farblos / ohne |
| 3 | 13:25 | 13,63 | 100 | 6,84 | 879 | 4,18 | 52 | — | 11,9 | klar | farblos / ohne |
| 4 | 13:35 | 13,72 | 200 | 6,82 | 886 | 4,06 | 52 | — | 11,8 | klar | farblos / ohne |
| 5 | 13:45 | 13,74 | 300 | 6,85 | 881 | 4,04 | 51 | — | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 7213 / 060525 | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*VM=[π*(½*SD)²]/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 79 A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | – |
| Casing Diameter (mm) (CD) | – |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | – |
| Static Water Level (m bToC*) (SWL) | 5,38 |
| Water Column (m) (WC=WD-SWL) | – |
| Abpumpvolumen (l) (PV=VM*WC) | ca. 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | – |
| Pumping Rate (l/min) | 7,5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (pH) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:25 | 5,38 | start | – | – | – | – | – | – | klar | bräunlich / ohne |
| 2 | 15:35 | 6,50 | 50 | 6,96 | 775 | 3,11 | 60 | – | 11,0 | klar | bräunlich / ohne |
| 3 | 15:45 | 6,50 | 100 | 6,99 | 781 | 3,45 | 59 | – | 11,9 | klar | bräunlich / ohne |
| 4 | 15:55 | 6,50 | 150 | 6,97 | 734 | 3,51 | 60 | – | 11,9 | klar | bräunlich / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 79 A / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 15:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | Ar1 |
| Weather | wolkig | Air Temperature | +17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 2x leergepumpt, dann PN

*VM=π*((½*BD)²)/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 80A |
| Location | Bismarck Kaserne Kastorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | – |
| Casing Diameter (mm) (CD) | – |
| Total Well Depth (m) (WD) | 14,67 |
| Volume per Meter (ltr) (VM[1]) | – |
| Static Water Level (m bToC[2]) (SWL) | 13,16 |
| Water Column (m) (WC=WD-SWL) | – |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | – |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 14,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | – |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 16:55 | 13,16 | start | – | – | – | – | – | – | schwach | trüb / ohne |
| 2 | 17:00 | 13,67 | 50 | 6,94 | 501 | 4,01 | 58 | – | 11,6 | schwach | trüb / ohne |
| 3 | 17:05 | 13,70 | 100 | 6,76 | 498 | 4,11 | 61 | – | 11,7 | schwach | trüb / ohne |
| 4 | 17:15 | 13,72 | 200 | 6,77 | 496 | 4,09 | 64 | – | 11,8 | schwach | trüb / ohne |
| 5 | 17:25 | 13,75 | 200 | 6,77 | 491 | 4,07 | 65 | – | 11,8 | schwach | trüb / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 80A / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 17:25 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC documents) | | kühl |
| Weather | wolkig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=(π*(VWBD)²)/100), [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 81A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 10,39 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:45 | 10,39 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:50 | 10,86 | 50 | 6,54 | 436 | 3,04 | 71 | — | 11,4 | klar | farblos / ohne |
| 3 | 11:55 | 11,07 | 100 | 6,56 | 435 | 2,98 | 72 | — | 11,4 | klar | farblos / ohne |
| 4 | 12:05 | 11,22 | 200 | 6,51 | 437 | 2,96 | 73 | — | 11,5 | klar | farblos / ohne |
| 5 | 12:15 | 11,32 | 300 | 6,52 | 438 | 2,91 | 73 | — | 11,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 81A 10605.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 12:15 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | ~ 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*) Mp/n*(X*SD)+3)/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778224 |

| Well Details | |
|---|---|
| Well No. | GWM 82A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (lm) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 14,43 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM'*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:20 | 14,43 | start | — | — | — | — | — | — | klar | farblos/ohne |
| 2 | 10:25 | 14,67 | 50 | 6,86 | 651 | 4,02 | 48 | — | 11,7 | klar | farblos/ohne |
| 3 | 10:30 | 14,72 | 100 | 6,86 | 688 | 4,01 | 51 | — | 11,6 | klar | farblos/ohne |
| 4 | 10:40 | 14,741 | 200 | 6,91 | 706 | 4,00 | 50 | — | 11,8 | klar | farblos/ohne |
| 5 | 10:50 | 14,75 | 300 | 6,87 | 702 | 3,99 | 52 | — | 11,8 | klar | farblos/ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 10:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(D/2*SD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 841A |
| Location | Bismarck Kaserne Kellerbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Metre (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,34 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 06.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Feste Kennz. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:00 | 11,34 | start | — | — | — | — | — | — | klar | keine Ablr / Odor |
| 2 | 14:05 | 12,69 | 50 | 6,86 | 459 | 4,00 | 50 | — | 11,2 | klar | keine Ablr / Odor |
| 3 | 14:10 | 12,96 | 100 | 6,86 | 486 | 3,86 | 51 | — | 11,3 | klar | keine Ablr / Odor |
| 4 | 14:20 | 13,14 | 200 | 6,86 | 482 | 3,85 | 51 | — | 11,3 | klar | keine Ablr / Odor |
| 5 | 14:30 | 13,22 | 300 | 6,87 | 486 | 3,81 | 52 | — | 11,3 | klar | keine Ablr / Odor |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 841A / 06.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | wolkig | Air Temperature | +17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*) Mehrfachnennungen möglich, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 3413 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,68 |
| Volume per Meter (ltr) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 15,65 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 22,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:40 | 15,65 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:45 | 17,59 | 50 | 6,98 | 589 | 3,21 | 42 | — | 11,1 | klar | farblos / ohne |
| 3 | 14:50 | 18,38 | 100 | 6,99 | 602 | 3,12 | 46 | — | 11,1 | klar | farblos / ohne |
| 4 | 15:00 | 18,82 | 200 | 6,97 | 608 | 3,46 | 46 | — | 11,2 | klar | farblos / ohne |
| 5 | 15:10 | 19,03 | 300 | 6,964 | 615 | 3,51 | 48 | — | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 3413 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | 1x1 |
| Weather | wolkig | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(D*BD)²/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kasorne Katzbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (ltr) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 9,06 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 08.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:40 | 9,06 | start | — | — | — | — | — | — | klar | farblos |
| 2 | 17:45 | 9,39 | 50 | 6,74 | 862 | 3,52 | 60 | — | 11,6 | klar | farblos |
| 3 | 17:50 | 9,47 | 100 | 6,75 | 880 | 3,54 | 66 | — | 11,6 | klar | farblos |
| 4 | 18:00 | 9,54 | 200 | 6,71 | 871 | 3,58 | 62 | — | 11,6 | klar | farblos |
| 5 | 18:10 | 9,56 | 300 | 6,73 | 871 | 3,54 | 64 | — | 11,6 | klar | farblos |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM85A / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 18:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

*V Min [l] = (π*(BD/2)²)/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 86 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,90 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (EV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xEV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:35 | leer | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 9:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | ~ 10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

*V Mn=[(x*SC)-y]*100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 87 |
| Location | Bismarck Kaserne Kötterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 06.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:30 | leer | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kalt |
| Weather | wolkig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

[1]Vm=[π*(½*BD)²]/1000, [2]below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM88 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 02.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:25 | 7,30 | start | 6,80 | 1516 | 4,92 | 62 | — | 11,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM88 / 02.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.05.25 / 9:25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(½*BD)²*100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kaserne Kaiserlaach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) / (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (8V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x8V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 06.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:15 | Leer | start | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / 9:15 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 13° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=π*(½*BD)²*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 90 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 08.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Farbe / Geruch |
| 1 | 9:55 | 7,71 | leer | 6,79 | 357 | 4,35 | 58 | — | 12,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 90 / 08.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 08.05.25 / 9:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | leer |
| Weather | wolkig | Air Temperature | + 15° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(X*BD)²/4*100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Kastellaun |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.05.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | 5,57 (GOK) | abpr. | 7,01 | 689 | 2,414 | 15 | — | 13,0 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 91 / 02.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.05.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | AM |
| Weather | wolkig | Air Temperature | +12 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,01 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ1 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Start | 05.05.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10 | 14,01 | start | — | — | — | — | — | — | schwach | klar / ohne |
| 2 | 16:15 | 14,24 | 50 | 6,91 | 1150 | 3,46 | 58 | — | 12,1 | schwach | klar / ohne |
| 3 | 16:20 | 14,41 | 100 | 6,92 | 961 | 3,42 | 56 | — | 12,1 | schwach | klar / ohne |
| 4 | 16:35 | 14,58 | 200 | 6,88 | 922 | 3,26 | 58 | — | 12,1 | schwach | klar / ohne |
| 5 | 16:40 | 14,65 | 300 | 6,89 | 906 | 3,29 | 57 | — | 12,1 | schwach | klar / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 92A / 06.05.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 06.05.25 / 16:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 16° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediments, Odor, etc.)

**Notes**

*VM=(π*(½*SD)²)/1000, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | S.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:15 | 23,99 | — | 6,98 | 862 | 4,32 | — | 56 | 13,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~ 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(ID/2)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 38 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,77 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A — |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:55 | 11,77 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 12:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~ ± 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

[1] VM=π*(X*BD)²/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 39 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,32 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ23 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 01.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:40 | 5,32 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:45 | 5,45 | 50 | 6,89 | 507 | 3,81 | 23 | — | 12,4 | klar | farblos / ohne |
| 3 | 12:50 | 5,49 | 100 | 6,89 | 529 | 5,61 | 29 | — | 12,0 | klar | farblos / ohne |
| 4 | 13:00 | 5,53 | 200 | 6,90 | 521 | 3,52 | 31 | — | 11,9 | klar | farblos / ohne |
| 5 | 13:10 | 5,56 | 300 | 6,90 | 511 | 3,48 | 31 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 39 / 01.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.06.25 / 13:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | M1 |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*((WD-BD)/1000)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 410 |
| Location | Bismarck Kaserne Kutterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 7,89 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:40 | 7,89 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:45 | 8,11 | 50 | 6,97 | 835 | 5,33 | 42 | — | 12,2 | klar | farblos / ohne |
| 3 | 18:50 | 8,24 | 100 | 6,96 | 832 | 5,81 | 39 | — | 12,4 | klar | farblos / ohne |
| 4 | 19:00 | 8,29 | 200 | 6,98 | 832 | 5,88 | 41 | — | 12,4 | klar | farblos / ohne |
| 5 | 19:10 | 8,35 | 300 | 6,99 | 830 | 5,91 | 39 | — | 12,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 410 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 19:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | MI |
| Weather | Niederschlag | Air Temperature | + 20 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*((WC*BD)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM) | |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:00 | 16,86 | — | 6,84 | 520 | 4,46 | 66 | - | 12,0 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*V Mantel*(N*SD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,60 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 20,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:15 | 11,60 | start | — | — | — | — | — | — | h.klar | farblos / ohne |
| 2 | 11:20 | 12,01 | 50 | 6,89 | 363 | 2,95 | 42 | — | 12,6 | h.klar | farblos / ohne |
| 3 | 11:25 | 12,05 | 100 | 6,88 | 358 | 2,51 | 41 | — | 11,8 | h.klar | farblos / ohne |
| 4 | 11:35 | 12,12 | 200 | 6,87 | 356 | 2,46 | 39 | — | 11,8 | h.klar | farblos / ohne |
| 5 | 11:40 | 12,15 | 300 | 6,86 | 350 | 2,38 | 38 | — | 11,7 | h.klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 71 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 11:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | 1x1 |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

[1] VM=(π*(½*BD)²)/1000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 12,05 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:05 | 12,05 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| CDC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 13:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | M1 |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Rles und Endtiefe gemessen

[redacted]

*) VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 173 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m b (ToC*) (SWL) | 5,46 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | | |
|---|---|---|
| Min Purge Volume (l) (~2xBV) | | — |
| Pumping Rate (l/min) | | — |
| Purge Method | | — |
| Pump Intake Depth (m bToC*) | | — |
| Date | | 02.06.25 |
| Duration of Pumping (min) | | — |
| Purged by | K.A. | — |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:50 | 5,46 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 15:50 | Sampled by | K.A. |
| Preservation | 4°C (see samples labels and/or CoC documents) | | — |
| Weather | | Air Temperature | + 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RLS und Endtiefe gemessen

[redacted]

[1] VM=[π*(½*SD)²]/100, *Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM78A |
| Location | Bismarck Kaserne Kottenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:40 | 12,40 | — | 7,25 | 761 | 4,62 | 70 | — | 12,1 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM78A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(½*BD)²/1000, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78 B |
| Location | Bismarck Kaserne Kattenhaen |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,21 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:25 | 13,21 | start | — | — | — | — | — | | klar | farblos/ohne |
| 2 | 13:30 | 13,59 | 50 | 7,11 | 821 | 3,88 | 29 | — | 12,0 | klar | farblos/ohne |
| 3 | 13:35 | 13,69 | 100 | 7,15 | 824 | 4,14 | 31 | — | 11,9 | klar | farblos/ohne |
| 4 | 13:40 | 13,75 | 200 | 7,16 | 826 | 4,26 | 32 | — | 11,9 | klar | farblos/ohne |
| 5 | 13:50 | 13,78 | 300 | 7,19 | 826 | 4,28 | 31 | — | 11,9 | klar | farblos/ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 78 B / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 13:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(½*BD))²/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM79A |
| Location | Bismarck Kaserne Kelsterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 5,49 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3*VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | 5 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 6,50 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35 | 5,49 | start | 6,72 | 636 | 3,44 | 68 | — | 13,41 | schwach | trüb / ohne |
| 2 | 15:45 | 6,50 | 50 | 6,69 | 646 | 3,41 | 72 | — | 12,9 | schwach | trüb / ohne |
| 3 | 15:55 | 6,50 | 100 | 6,69 | 643 | 3,38 | 71 | — | 12,8 | schwach | trüb / ohne |
| 4 | 16:05 | 6,50 | 150 | 6,69 | 645 | 3,37 | 72 | — | 12,8 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM79A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 16:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 3x leergepumpt, dann PN

[redacted]

[1]VM=[π*(¼*BD)²]/100, [2]below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM80A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,21 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:10 | 13,21 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 17:15 | 13,70 | 50 | 6,73 | 428 | 4,82 | 45 | — | 13,0 | klar | farblos / ohne |
| 3 | 17:20 | 13,75 | 100 | 6,24 | 439 | 4,91 | 61 | — | 13,0 | schwach | weiß / ohne |
| 4 | 17:30 | 13,77 | 200 | 6,76 | 447 | 4,94 | 61 | — | 12,9 | schwach | weiß / ohne |
| 5 | 17:40 | 13,79 | 300 | 6,75 | 452 | 4,96 | 66 | — | 12,8 | schwach | weiß / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM80A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 17:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 1x1 |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*V Min [l] = (WD-SWL)*BD²/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778241 |

| Well Details | |
|---|---|
| Well No. | GWM81A |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 11,90 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 10,54 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 700 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ1 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:55 | 10,54 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:00 | 10,92 | 50 | 6,90 | 438 | 3,05 | 54 | — | 12,5 | klar | farblos / ohne |
| 3 | 12:05 | 11,20 | 100 | 6,90 | 416 | 3,01 | 55 | — | 12,1 | klar | farblos / ohne |
| 4 | 12:15 | 11,29 | 200 | 6,91 | 412 | 2,99 | 56 | — | 12,0 | klar | farblos / ohne |
| 5 | 12:25 | 11,38 | 300 | 6,86 | 407 | 2,96 | 51 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM81A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 12:25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~700 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778224 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 14,61 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 20,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:30 | 14,61 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 10:35 | 14,83 | 50 | 6,96 | 621 | 4,06 | 71 | — | 12,0 | klar | farblos / ohne |
| 3 | 10:40 | 14,87 | 100 | 6,91 | 619 | 3,86 | 56 | — | 11,9 | klar | farblos / ohne |
| 4 | 10:50 | 14,90 | 200 | 6,91 | 620 | 3,82 | 52 | — | 11,9 | klar | farblos / ohne |
| 5 | 11:00 | 14,91 | 300 | 6,89 | 619 | 3,77 | 49 | — | 11,9 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM82A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 11:00 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(W-SD)²/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM84A |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 11,43 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:05 | 11,43 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:10 | 11,76 | 50 | 6,92 | 510 | 4,59 | 411 | — | 11,8 | klar | farblos / ohne |
| 3 | 14:15 | 11,99 | 100 | 6,91 | 461 | 4,54 | 414 | — | 11,6 | klar | farblos / ohne |
| 4 | 14:20 | 13,21 | 200 | 6,94 | 456 | 4,56 | 418 | — | 11,9 | klar | farblos / ohne |
| 5 | 14:30 | 13,28 | 300 | 6,96 | 457 | 4,48 | 419 | — | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM84A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~ 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(CD-BD)²)/1000, *bToC = below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778224 |

| Well Details | |
|---|---|
| Well No. | GWM 8413 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,68 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC*) (SWL) | 15,07 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:40 | 15,81 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:45 | 17,68 | 50 | 6,92 | 417 | 3,68 | 46 | — | 12,2 | klar | farblos / ohne |
| 3 | 14:50 | 18,49 | 100 | 6,92 | 433 | 3,65 | 44 | — | 11,9 | klar | farblos / ohne |
| 4 | 15:00 | 18,90 | 200 | 6,91 | 441 | 3,64 | 45 | — | 11,8 | klar | farblos / ohne |
| 5 | 15:10 | 19,07 | 300 | 6,91 | 442 | 3,62 | 46 | — | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 8413 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 15:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*(¼*BD)²/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 85 A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 9,22 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:55 | 9,22 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:00 | 9,52 | 50 | 6,68 | 788 | 4,28 | 61 | — | 12,5 | klar | farblos / ohne |
| 3 | 18:05 | 9,70 | 100 | 6,65 | 796 | 4,18 | 58 | — | 12,2 | klar | farblos / ohne |
| 4 | 18:15 | 9,77 | 200 | 6,64 | 799 | 4,06 | 50 | — | 12,2 | klar | farblos / ohne |
| 5 | 18:25 | 9,80 | 300 | 6,61 | 815 | 4,03 | 49 | — | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 85 A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 18:25 | Sampled by | K.A |
| Preservation | 4 °C (see sample labels and/or CoC documents) | | |
| Weather | | Air Temperature | ~1 ~20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=pi*((ID*SD)^2)/1000; *Below Top of Casing; [1]Electrolytic Conductivity; [2]Dissolved Oxygen; [3]Ag/AgCl-Electrode; [4]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 86 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Messstelle trocken

[redacted]

[1] VM=[π*(D/1'000)²]/4*1'000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (EV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xEV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Foam / Smell / Colour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 7,15 | — | 7,02 | 1155 | 4,48 | 68 | — | 12,7 | clear | foam low / clear |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | MT |
| Weather | Leicht | Air Temperature | +18 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(0,5*BD)²)/1000; *Below Top of Casing; *Electrolytic Conductivity; *Dissolved Oxygen; [5]Ag/AgCl-Electrode; [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM89 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | |
| Volume per Meter (l/m) (VM) | |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 02.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. — |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe Kennung |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | klar | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 18 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=π*(D/1000)²/4*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 90 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | – |
| Casing Diameter (mm) (CD) | – |
| Total Well Depth (m) (WD) | – |
| Volume per Meter (l/m) (VM) | – |
| Static Water Level (m bToC[1]) (SWL) | – |
| Water Column (m) (WC=WD-SWL) | – |
| Abpumpvolumen (l) (BV=WC*VM) | – |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | – |
| Pumping Rate (l/min) | – |
| Purge Method | – |
| Pump Intake Depth (m bToC[1]) | – |
| Date | 02.06.25 |
| Duration of Pumping (min) | – |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 7,85 | – | 7,06 | 866 | 2,51 | 48 | – | 13,2 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sampler Name | GWM / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 9:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] Meters below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAN 104 |
| Project Number | 2416773241 |

| Well Details | |
|---|---|
| Well No. | GWM91 |
| Location | Bismarck Kaserne Kotzebach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC: WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2 BV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Inlet Depth (m bToC*) | — |
| Date | 02.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.K. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C. (µS/cm) | D.O.* (mg/L) | Redox (mV) | Redoff (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 5,79 (GOK) | — | 6,82 | 631 | 2,61 | 174 | — | 15,41 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 10:00 | Sampled by | K.K. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VMP in ¼ (1½") or ¾" (3") Above Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778624 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kastorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,22 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 02.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:20 | 14,22 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 16:25 | 14,39 | 50 | 6,94 | 1045 | 3,64 | 22 | — | 12,6 | klar | farblos / ohne |
| 3 | 16:35 | 14,55 | 100 | 6,92 | 1044 | 3,74 | 23 | — | 12,6 | klar | farblos / ohne |
| 4 | 16:45 | 14,69 | 200 | 6,91 | 1028 | 3,78 | 26 | — | 12,5 | klar | farblos / ohne |
| 5 | 16:55 | 14,74 | 300 | 6,92 | 1020 | 3,86 | 28 | — | 12,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM92A / 02.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 02.06.25 / 16:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(1½"/2)²)/100, **bToC = below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 125 |
| Project Number | 24694605 |

| Well Details | |
|---|---|
| Well No. | GWM37 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (SV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[3] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:35 | 24,05 | — | 6,86 | 381 | 5,51 | 92 | — | 12,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 10:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| |

*Value in (): BD-WD-SWL, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 36 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[4]) (SWL) | 11,59 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[4]) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[4]) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14.50 | 11,59 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 14:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | sonnig | Air Temperature | + 24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

[1] VMeln*(1+(SE)*β/100), [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 39 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 5,45 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 15,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:35 | 5,45 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:40 | 5,56 | 50 | 6,84 | 482 | 3,55 | 71 | — | 12,7 | klar | farblos / ohne |
| 3 | 14:45 | 5,60 | 100 | 6,85 | 501 | 3,57 | 71 | — | 12,7 | klar | farblos / ohne |
| 4 | 14:55 | 5,62 | 200 | 6,86 | 467 | 3,59 | 71 | — | 12,6 | klar | farblos / ohne |
| 5 | 15:05 | 5,63 | 300 | 6,88 | 455 | 3,58 | 71 | — | 12,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 39 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 15:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | Nein |
| Weather | sonnig | Air Temperature | ~ 24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 39 / 01.07.25
QA/QC

[redacted]

[1] Volume per Meter (l/m) = (3.14 * (BD/2)^2)/1000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC**) (SWL) | 7,95 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3xV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC**) | 14,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC**) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.** (mg/L) | Redox*** (mV) | Redox**** (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:45 | 7,95 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:50 | 8,15 | 50 | 6,95 | 702 | 4,26 | 66 | — | 12,5 | klar | farblos / ohne |
| 3 | 18:55 | 8,28 | 100 | 6,91 | 681 | 4,25 | 64 | — | 12,5 | klar | farblos / ohne |
| 4 | 19:05 | 8,32 | 200 | 6,89 | 665 | 4,05 | 63 | — | 12,4 | klar | farblos / ohne |
| 5 | 19:15 | 8,37 | 300 | 6,88 | 661 | 3,89 | 63 | — | 12,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 19:15 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | sonnig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM40 / 01.07.25
QA/QC

*VM=π*(V/*BD)²/100, **Below Top of Casing, ***Electrolytic Conductivity, ****Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | KCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM70 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:00 | 17,08 | — | 6,89 | 622 | 4,82 | 88 | — | 12,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM70 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 9:00 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*[1] Min [m³/h] (½*BD)²*π*100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction*

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (ltr) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 11,71 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM'*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:00 | 11,71 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:05 | 12,08 | 50 | 6,86 | 359 | 2,76 | 66 | — | 12,8 | klar | farblos / ohne |
| 3 | 13:10 | 12,14 | 100 | 6,88 | 358 | 2,64 | 67 | — | 12,6 | klar | farblos / ohne |
| 4 | 13:20 | 12,20 | 200 | 6,87 | 356 | 2,54 | 67 | — | 12,6 | klar | farblos / ohne |
| 5 | 13:30 | 12,24 | 300 | 6,87 | 355 | 2,48 | 66 | — | 12,6 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 010725 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 13:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | sonnig | Air Temperature | +24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM71 / 01.07.25
QA/QC

*VM=π*((½*BD)²)/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 12,25 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (EV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xEV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:00 | 12,25 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 15:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*VM=[π*(ID/2)²]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 73 |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (lm) (VM) | |
| Static Water Level (m bToC*) (SWL) | 5,59 |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=VM*WC) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC*) | |
| Date | 01.07.25 |
| Duration of Pumping (min) | |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:15 | 5,59 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 16:15 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +23° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 1001 |
| Project Number | 246778.24 |

| Well Details | |
|---|---|
| Well No | GWM 78A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | 12,44 | start | 6,91 | 807 | 2,81 | 76 | — | 15,4 | klar | Farbe / Geruch farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 10:10 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(½*BD)²*100, *Below Top of Cassing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction*

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 7813 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bTOC*) (SWL) | 13,31 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM'*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bTOC*) | 15,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 15:20 | 13,31 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:25 | 13,66 | 50 | 7,10 | 737 | 4,27 | 61 | — | 12,6 | klar | farblos / ohne |
| 3 | 15:30 | 13,74 | 100 | 7,09 | 739 | 4,69 | 67 | — | 12,6 | klar | farblos / ohne |
| 4 | 15:40 | 13,79 | 200 | 7,11 | 740 | 4,78 | 68 | — | 12,7 | klar | farblos / ohne |
| 5 | 15:50 | 13,80 | 300 | 7,02 | 741 | 4,89 | 69 | — | 12,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 7813 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 15:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | sonnig | Air Temperature | +24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(¼*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773.24 |

| Well Details | |
|---|---|
| Well No. | GWM 79A |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,60 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 5 |
| Purge Method | SAS |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10 | 5,60 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 16:20 | 6,50 | 50 | 6,72 | 626 | 4,22 | 61 | — | 13,3 | schwach | weiß / ohne |
| 3 | 16:30 | 6,50 | 100 | 6,74 | 624 | 4,21 | 58 | — | 13,2 | schwach | weiß / ohne |
| 4 | 16:40 | 6,50 | 150 | 6,76 | 622 | 4,25 | 59 | — | 13,1 | schwach | weiß / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 79A/01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 16:40 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | wolkig | Air Temperature | ~ 27° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Pegel 3x leergepumpt, dann PN

*) Min(m³)=(VM*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 801A |
| Location | Bismarck Kaserne, Kalterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,30 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (6V=VM*WC) | 200 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x6V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 20 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:30 | 13,30 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 17:35 | 13,77 | 50 | 6,71 | 408 | 3,86 | 419 | — | 13,1 | klar | farblos / ohne |
| 3 | 17:40 | 13,81 | 100 | 6,74 | 411 | 3,81 | 52 | — | 12,9 | klar | farblos / ohne |
| 4 | 17:50 | 13,84 | 200 | 6,75 | 415 | 3,96 | 541 | — | 12,9 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM801A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 17,50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*) Meßpunkt (WD-BD)/100, **) Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 811 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 10,65 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 13,50 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:40 | 10,65 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:45 | 10,99 | 50 | 6,89 | 386 | 3,26 | 71 | — | 12,6 | klar | farblos / ohne |
| 3 | 14:00 | 11,26 | 100 | 6,85 | 394 | 3,38 | 68 | — | 12,5 | klar | farblos / ohne |
| 4 | 14:10 | 11,36 | 200 | 6,86 | 390 | 3,44 | 69 | — | 12,5 | klar | farblos / ohne |
| 5 | 14:20 | 11,44 | 300 | 6,85 | 399 | 3,51 | 69 | — | 12,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 811 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 14:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | +24°C |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=[π*(WD-SD)²]/1000, [2]below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 82 A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,85 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:15 | 14,85 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:20 | 15,09 | 50 | 6,86 | 594 | 4,18 | 81 | — | 12,7 | klar | farblos / ohne |
| 3 | 12:25 | 15,15 | 100 | 6,88 | 576 | 4,10 | 76 | — | 12,7 | klar | farblos / ohne |
| 4 | 12:35 | 15,17 | 200 | 6,86 | 570 | 4,09 | 73 | — | 12,7 | klar | farblos / ohne |
| 5 | 12:45 | 15,18 | 300 | 6,88 | 569 | 4,06 | 71 | — | 12,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 82 A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 12:45 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | wolkig | Air Temperature | +24° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*) V Mn[m³]=(π*BD)²/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 84A |
| Location | Bismarck Kaserne Kelsterbach |
| Coordinates | |

| Well Specifications & Measurument | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,52 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:50 | 11,52 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 10:55 | 12,80 | 50 | 6,89 | 381 | 3,88 | 68 | — | 12,5 | klar | farblos / ohne |
| 3 | 11:00 | 13,16 | 100 | 6,86 | 412 | 3,91 | 66 | — | 12,5 | klar | farblos / ohne |
| 4 | 11:10 | 13,32 | 200 | 6,90 | 416 | 3,89 | 64 | — | 12,6 | klar | farblos / ohne |
| 5 | 11:20 | 13,36 | 300 | 6,88 | 418 | 3,90 | 64 | — | 12,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | GWM84A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 11:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 1x1 |
| Weather | wolkig | Air Temperature | + 27° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*) Vol=π*(W*BD)²/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM B413 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,60 |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | 16,00 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (uS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:30 | 16,00 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:35 | 17,82 | 50 | 6,90 | 466 | 4,01 | 71 | — | 12,1 | klar | farblos / ohne |
| 3 | 11:40 | 18,58 | 100 | 6,91 | 451 | 3,94 | 64 | — | 12,4 | klar | farblos / ohne |
| 4 | 11:50 | 18,97 | 200 | 6,81 | 454 | 3,60 | 64 | — | 12,4 | klar | farblos / ohne |
| 5 | 12:00 | 19,16 | 300 | 6,91 | 453 | 3,36 | 63 | — | 12,5 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM B413 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 12:00 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | milchig | Air Temperature | + 23° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(ID/2)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kaserne Kasterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m b ToC*) (SWL) | 9,37 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m b ToC*) | 13,00 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m b ToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[3] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 18:05 | 9,37 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:10 | 9,62 | 50 | 6,80 | 735 | 4,10 | 49 | — | 12,6 | klar | farblos / ohne |
| 3 | 18:15 | 9,79 | 100 | 6,68 | 741 | 4,14 | 66 | — | 12,7 | klar | farblos / ohne |
| 4 | 18:25 | 9,87 | 200 | 6,69 | 736 | 4,12 | 68 | — | 12,7 | klar | farblos / ohne |
| 5 | 18:35 | 9,89 | 300 | 6,72 | 725 | 4,11 | 71 | — | 12,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 85A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 18:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ~ 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(0,5*BD)²]/1000, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | ECAN 2025 |
| Project Number | 246-727824 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck Kasorne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (if time) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 10:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCHN 2021 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWMB7 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | |
| Purge Method | |
| Pump Intake Depth (m bToC*) | |
| Date | 01.07.25 |
| Duration of Pumping (min) | |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 9:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | w. bewölkt | Air Temperature | ~ +22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (SV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | 7,71 | — | 6,92 | 1156 | 4,16 | 64 | — | 12,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 88 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | ~ 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 125 |
| Project Number | 24604608 |

| Well Details | |
|---|---|
| Well No. | GBM89 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (RV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xRV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (Uhrzeit) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[3] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:40 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 09.07.25 / 9:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 125 |
| Project Number | 24664605 |

| Well Details | |
|---|---|
| Well No. | GKM90 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | |
| 1 | 10:20 | 7,97 | — | — | — | — | — | — | — | — | Farbe / Geruch |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 10:20 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | 21 +22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

zu wenig Wasser für PN

[redacted]

*Vol=[π*(½*BD)²*100], *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 1041 |
| Project Number | 246773241 |

| Well Details | |
|---|---|
| Well No. | GWM91 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 01.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:15 | 5,15 (GOK) | — | 7,01 | 4341 | 4,27 | 741 | — | 11,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM91 / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 9:15 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction*

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 216778241 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,37 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 01.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:50 | 14,37 | start | — | — | — | — | — | — | schwach | roten / ohne |
| 2 | 16:55 | 14,51 | 50 | 6,86 | 1021 | 3,49 | 49 | — | 13,1 | schwach | roten / ohne |
| 3 | 17:00 | 14,65 | 100 | 6,81 | 982 | 3,50 | 52 | — | 12,9 | klar | farblos / ohne |
| 4 | 17:10 | 14,78 | 200 | 6,82 | 966 | 3,52 | 54 | — | 12,8 | klar | farblos / ohne |
| 5 | 17:20 | 14,83 | 300 | 6,79 | 958 | 3,48 | 57 | — | 12,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 92A / 01.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 01.07.25 / 17:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | sonnig | Air Temperature | ~23° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*VM=(π*(ID/2)²)/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 216778241 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (Vol) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:25 | 23,32 | — | 7,09 | 810 | 6,55 | 64 | — | 11,9 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 10:25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(½*BD))²/100 *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox+Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 38 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Sapcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,75 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 15:10 | 11,75 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 15:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

[1]VM=[π*(½*BD)²]/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,58 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:45 | 5,58 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:50 | 5,70 | 50 | 6,86 | 452 | 3,82 | 54 | — | 12,0 | klar | farblos / ohne |
| 3 | 14:55 | 5,75 | 100 | 6,85 | 416 | 3,50 | 56 | — | 12,1 | klar | farblos / ohne |
| 4 | 15:05 | 5,76 | 200 | 6,81 | 416 | 3,54 | 58 | — | 12,1 | klar | farblos / ohne |
| 5 | 15:15 | 5,77 | 300 | 6,82 | 414 | 3,55 | 56 | — | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM39 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 1515 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 39 / 31.07.25
QA / QC

*) Mean (DTW-BD)*VM/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | |
| Static Water Level (m bToC*) (SWL) | 8,03 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (SI t:min) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:45 | 8,03 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:50 | 8,20 | 50 | 6,88 | 696 | 4,65 | 66 | — | 12,0 | klar | farblos / ohne |
| 3 | 18:55 | 8,30 | 100 | 6,85 | 694 | 4,60 | 64 | — | 12,1 | klar | farblos / ohne |
| 4 | 19:05 | 8,36 | 200 | 6,85 | 692 | 4,52 | 67 | — | 12,1 | klar | farblos / ohne |
| 5 | 19:15 | 8,41 | 300 | 6,84 | 691 | 4,45 | 68 | — | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 40 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM40 / 31.07.25
QA/QC

[redacted]

*VM=π*(d/2000)²*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM70 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:00 | 17,40 | — | 6,85 | 485 | 5,65 | 44 | — | 11,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM70 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | MT |
| Weather | wolkig | Air Temperature | + 16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediments, Odor, etc.)

**Notes**

[redacted]

*[1] Mm[m³]=(π*(0,5*BD)²)/1000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM71 |
| Location | Bismarck Kaserne Katzbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | – |
| Casing Diameter (mm) (CD) | – |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (ltr) (VM) | – |
| Static Water Level (m bToC*) (SWL) | 11,72 |
| Water Column (m) (WC=WD-SWL) | – |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | – |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:50 | 11,78 | start | – | – | – | – | – | – | klar | farblos / ohne |
| 2 | 11:55 | 12,02 | 50 | 6,741 | 366 | 3,11 | 64 | – | 12,2 | klar | farblos / ohne |
| 3 | 12:00 | 12,07 | 100 | 6,77 | 362 | 3,03 | 62 | – | 12,1 | klar | farblos / ohne |
| 4 | 12:10 | 12,11 | 200 | 6,70 | 359 | 3,01 | 61 | – | 12,1 | klar | farblos / ohne |
| 5 | 12:20 | 12,17 | 300 | 6,73 | 356 | 2,95 | 67 | – | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 12:20 | Sampled by | K.A |
| Preservation | 4°C, (see sample labels and/or CoC document) | | |
| Weather | windig | Air Temperature | + 21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM71 / 31.07.25
QA / QC

*VM=(π*(D/2)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kasorno Kaltenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m b ToC*) (SWL) | 12,52 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM'*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:00 | 12,52 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | wolkig | Air Temperature | +22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Rhs und Endtiefe gemessen

[redacted]

*VM=π*((SD)²/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Kaiserlach |
| Coordinates | |

| Well Sapcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5.73 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:25 | 5,73 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*VM=π*(D-SD)²/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[4]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[4]) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[4]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 12,49 | — | 6,78 | 775 | 4,11 | 66 | — | 12,2 | klar | farblos/ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM78A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 10:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | N1 |
| Weather | wolkig | Air Temperature | + 28° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=ln*((X*BD)²)/100, [4] below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78B |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,48 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:30 | 13,48 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:35 | 13,78 | 50 | 6,84 | 741 | 4,12 | 58 | — | 12,4 | klar | farblos / ohne |
| 3 | 15:40 | 13,85 | 100 | 6,82 | 721 | 3,62 | 59 | — | 12,2 | klar | farblos / ohne |
| 4 | 15:50 | 13,90 | 200 | 6,80 | 709 | 3,61 | 61 | — | 12,1 | klar | farblos / ohne |
| 5 | 16:00 | 13,91 | 300 | 6,78 | 712 | 3,45 | 63 | — | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 78B / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 16:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*) $V_M = \pi \cdot (r_{BD})^2 \cdot h/1000$, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM79A |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | – |
| Casing Diameter (mm) (CD) | – |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM[1]) | – |
| Static Water Level (m bToC[2]) (SWL) | 5,71 |
| Water Column (m) (WC=WD-SWL) | – |
| Abpumpvolumen (l) (BV=VM*WC) | ca. 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SP3 |
| Pump Intake Depth (m bToC[2]) | 6,50 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 20 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:15 | 5,71 | start | – | – | – | – | – | | schwach | rötlich / ohne |
| 2 | 16:21 | 6,50 | 50 | 6,84 | 604 | 4,65 | 441 | – | 12,8 | schwach | rötlich / ohne |
| 3 | 16:28 | 6,50 | 100 | 6,87 | 608 | 4,22 | 52 | – | 12,8 | schwach | rötlich / ohne |
| 4 | 16:35 | 6,50 | 150 | 6,86 | 607 | 4,25 | 55 | – | 12,8 | schwach | rötlich / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM79A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 16:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +21 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=π*(½*BD)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 80A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,42 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 200 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,30 |
| Date | 31.07.25 |
| Duration of Pumping (min) | |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:30 | 13,42 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 17:35 | 13,89 | 50 | 6,75 | 411 | 2,86 | 74 | — | 12,4 | klar | farblos / ohne |
| 3 | 17:40 | 13,97 | 100 | 6,71 | 416 | 2,91 | 77 | — | 12,4 | klar | farblos / ohne |
| 4 | 17:50 | 14,02 | 200 | 6,72 | 409 | 2,95 | 78 | — | 12,4 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 80A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 17:50 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | Nein |
| Weather | wolkig | Air Temperature | + 20 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(ID/2)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 81A |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m b ToC*) (SWL) | 10,82 |
| Water Column (m) (WC=WD-SWL) | — |
| 4Spumpvolumen (l) (EV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m b ToC*) | 13,50 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m b ToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[3] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:00 | 10,82 | start | — | — | — | — | — | — | klar | trübe / ohne |
| 2 | 14:05 | 11,11 | 50 | 6,74 | 376 | 3,21 | 62 | — | 12,2 | klar | trübe / ohne |
| 3 | 14:10 | 11,47 | 100 | 6,75 | 371 | 3,24 | 64 | — | 12,2 | klar | trübe / ohne |
| 4 | 14:20 | 11,57 | 200 | 6,76 | 342 | 3,08 | 62 | — | 12,2 | klar | trübe / ohne |
| 5 | 14:30 | 11,63 | 300 | 6,79 | 333 | 3,05 | 61 | — | 12,2 | klar | trübe / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 81A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 14:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | +22° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*VM=π*(D²*SD)/4/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 15,05 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:10 | 15,05 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:15 | 15,39 | 50 | 6,88 | 501 | 4,61 | 65 | — | 12,2 | klar | farblos / ohne |
| 3 | 11:20 | 15,45 | 100 | 6,87 | 481 | 4,54 | 66 | — | 12,2 | klar | farblos / ohne |
| 4 | 11:30 | 15,47 | 200 | 6,88 | 471 | 4,52 | 67 | — | 12,2 | klar | farblos / ohne |
| 5 | 11:40 | 15,48 | 300 | 6,91 | 462 | 4,45 | 65 | — | 12,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 11:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | MI |
| Weather | wolkig | Air Temperature | + 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VMe[n°(%*SD)]/100, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 216778241 |

| Well Details | |
|---|---|
| Well No. | GWM 84A |
| Location | Bismarck Kaserne Kettorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,65 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM*3) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:10 | 11,65 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:15 | 11,84 | 50 | 6,78 | 366 | 4,21 | 46 | — | 12,4 | klar | farblos / ohne |
| 3 | 13:20 | 12,21 | 100 | 6,741 | 354 | 4,06 | 56 | — | 12,3 | klar | farblos / ohne |
| 4 | 13:30 | 12,36 | 200 | 6,75 | 346 | 3,92 | 62 | — | 12,2 | klar | farblos / ohne |
| 5 | 13:40 | 12,43 | 300 | 6,744 | 345 | 3,86 | 63 | — | 12,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | GWM 84A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 13:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*[1] V Meßr*(1+(*SD)-[]/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 84B |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,60 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 16,11 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 12:30 | 16,11 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:35 | 17,85 | 50 | 6,88 | 421 | 4,44 | 61 | — | 12,2 | klar | farblos / ohne |
| 3 | 12:40 | 18,44 | 100 | 6,86 | 403 | 4,31 | 62 | — | 12,1 | klar | farblos / ohne |
| 4 | 12:50 | 18,90 | 200 | 6,85 | 406 | 4,26 | 63 | — | 12,1 | klar | farblos / ohne |
| 5 | 13:00 | 19,11 | 300 | 6,84 | 404 | 4,25 | 63 | — | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 84B / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 13:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 22 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(½*SD)²/100, *bToC Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 85A |
| Location | Bismarck Kaserne Kelkorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 9,57 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump intake Depth (m bToC*) | 18,00 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:05 | 9,57 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:10 | 9,75 | 50 | 6,71 | 801 | 4,26 | 77 | — | 11,8 | klar | farblos / ohne |
| 3 | 18:15 | 10,01 | 100 | 6,74 | 751 | 4,21 | 73 | — | 11,9 | klar | farblos / ohne |
| 4 | 18:25 | 10,10 | 200 | 6,74 | 722 | 4,11 | 71 | — | 11,8 | klar | farblos / ohne |
| 5 | 18:35 | 10,11 | 300 | 6,77 | 709 | 4,05 | 72 | — | 11,8 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 85A / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 18:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

✓

**Notes**

*VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778ZH |

| Well Details | |
|---|---|
| Well No. | GWM 86 |
| Location | Bismarck Kaserne Kelsterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | |
| Casing Diameter (mm) (CD) | |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (V/M) | |
| Static Water Level (m bToC*) (SWL) | |
| Water Column (m) (WC=WD-SWL) | |
| Abpumpvolumen (l) (BV=WC*V/M) | |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 7,62 | — | 6,82 | 610 | 4,60 | 76 | — | 13,6 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | GWM 86 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | wolkig | Air Temperature | + 18 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=(π*(½*SD)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 8.7 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Pumped by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:40 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:40 | Sampled by | K.A. |
| Preservation | 4°C (site sample labels and/or CoC document) | | kühl |
| Weather | wolkig | Air Temperature | ± 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*[1] Mefn*((X-SD)-(Y-OD)), *Shaw, Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction*

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Kaiserlautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:30 | 7,16 | — | 6,81 | 1255 | 4,25 | 39 | — | 11,1 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 88 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*V Mehr*(N*BD)²/4000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (Vol') | — |
| Static Water Level (m bToC[1]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*Vol') | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:20 | 7,95 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

keine PN möglich, Wasserstand nicht ausreichend

[redacted]

[1] VM=π*(½*BD)²*100, [1] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Allpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 10:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 18° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

Messstelle trocken

[redacted]

[1] VM=π*((½*BD)²)*100, Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM31 |
| Location | Bismarck Kaserne Ketsch |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (40h) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 31.07.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | 5,01 (40h) | — | 6,83 | 605 | 4,85 | 341 | — | 13,3 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM31 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 9:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | + 16 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(BD/2)²]/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM921 |
| Location | Bismarck Kaserne Kotterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (Vlf) | — |
| Static Water Level (m bToC*) (SWL) | 14,58 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=Vlf*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 31.07.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
| 1 | 16:45 | 14,58 | start | — | — | — | — | — | — | schwach | trüb / ohne |
| 2 | 16:50 | 14,73 | 50 | 6,83 | 955 | 4,09 | 77 | — | 12,8 | schwach | trüb / ohne |
| 3 | 16:55 | 14,88 | 100 | 6,761 | 943 | 4,12 | 74 | — | 12,8 | klar | farblos / ohne |
| 4 | 17:05 | 15,01 | 200 | 6,79 | 928 | 4,18 | 76 | — | 12,7 | klar | farblos / ohne |
| 5 | 17:15 | 15,08 | 300 | 6,72 | 913 | 4,25 | 78 | — | 12,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM921 / 31.07.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 31.07.25 / 17:15 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | wolkig | Air Temperature | ~ 20 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(0.5*BD)²]/1000; *Below Top of Casing; *Electrolytic Conductivity; *Dissolved Oxygen; [2]Ag/AgCl-Electrode; [3]Redox Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 37 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:05 | 23,86 | — | 7,11 | 877 | 4,85 | 83 | — | 12,1 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM37 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 11:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*(¼*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM38 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,87 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:35 | 11,87 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 11:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | Regen | Air Temperature | + 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RLS und Endtiefe gemessen

[redacted]

[1] VM=(π*((½*BD)²))/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 39 |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,70 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[4] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:20 | 5,70 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:25 | 5,83 | 50 | 6,93 | 539 | 4,51 | 76 | — | 12,2 | klar | farblos / ohne |
| 3 | 11:30 | 5,86 | 100 | 6,92 | 559 | 4,44 | 76 | — | 12,1 | klar | farblos / ohne |
| 4 | 11:40 | 5,87 | 200 | 6,91 | 565 | 4,37 | 77 | — | 12,1 | klar | farblos / ohne |
| 5 | 11:50 | 5,87 | 300 | 6,93 | 568 | 4,26 | 79 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 11:50 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 39 / 28.08.25
QA / QC

[redacted]

*) Meter ("/" BD) - (VM * WC), *) Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [4] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 40 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 8,11 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 14,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:30 | 8,11 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:35 | 8,30 | 50 | 6,96 | 793 | 4,12 | 78 | — | 12,3 | klar | farblos / ohne |
| 3 | 18:40 | 8,42 | 100 | 6,94 | 762 | 4,15 | 77 | — | 12,2 | klar | farblos / ohne |
| 4 | 18:50 | 8,47 | 200 | 6,93 | 754 | 4,16 | 76 | — | 12,1 | klar | farblos / ohne |
| 5 | 19:00 | 8,51 | 300 | 6,91 | 745 | 4,18 | 76 | — | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sampler Name | GWM 40 / 28.08.25 | Sampling Method | Pump Sample |
| Sample(s) Date & Time | 28.08.25 / 19:00 | Sampled by | K.A. |
| Preservation | 4 °C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 40 / 28.08.25
QA / QC

[redacted]

[1] VM=(π*(BD/2)²)/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 70 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | 17,54 | — | 6,78 | 535 | 5,54 | 0 | — | 12,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 70 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*) VM=π*(¼*BD)²/100, **) bToC: Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sapcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,96 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:40 | 11,96 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:45 | 12,22 | 50 | 6,69 | 429 | 3,52 | 101 | — | 12,3 | klar | farblos / ohne |
| 3 | 14:50 | 12,26 | 100 | 6,70 | 419 | 3,32 | 92 | — | 12,3 | klar | farblos / ohne |
| 4 | 15:10 | 12,31 | 200 | 6,71 | 416 | 3,28 | 90 | — | 12,3 | klar | farblos / ohne |
| 5 | 15:20 | 12,35 | 300 | 6,71 | 411 | 3,21 | 88 | — | 12,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 71 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 15:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM 71 / 28.08.25
QA/QC

*VM=(π*(BD)²)/4000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 22 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | 114,45 |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 12,58 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 11:45 | 12,58 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.06.25 / 11:45 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | Regen | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RLs und Endtiefe gemessen

[redacted]

*VM=π*(½*BD)²*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m.b.ToC[2]) (SWL) | 5,85 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 28.06.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[2]) | volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:25 | 5,85 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.06.25 / 16:25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

neue RWS und Endtiefe gemessen

[redacted]

[1]VM=[π*(0,5*BD)²]/100; [2]below Top of Casing; [3]Electrolytic Conductivity; [4]Dissolved Oxygen; [5]Ag/AgCl-Electrode; [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78 1 |
| Location | Bismarck Kaserne Kaiserlach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:30 | 12,51 | — | 6,91 | 871 | 3,62 | 68 | — | 12,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM78 1 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 10:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odour, etc.)

**Notes**

*VM=π*((½*BD)²)*100, *Below Top of Casing, [2]Electrolytic Conductivity, [3] Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78 B |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Sapcifications & Measurament | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,53 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:00 | 13,53 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:05 | 13,85 | 50 | 6,99 | 879 | 5,26 | 82 | — | 12,6 | klar | farblos / ohne |
| 3 | 12:10 | 13,92 | 100 | 6,98 | 866 | 4,92 | 83 | — | 12,5 | klar | farblos / ohne |
| 4 | 12:20 | 13,97 | 200 | 6,99 | 861 | 4,81 | 84 | — | 12,4 | klar | farblos / ohne |
| 5 | 12:30 | 13,99 | 300 | 6,97 | 856 | 4,80 | 85 | — | 12,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 78 B / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 12:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | Regen | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*(½*SD)²/100, *BuK=m Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 79A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,80 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | ca 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 20 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:05 | 5,80 | start | — | — | — | — | — | — | schwach | roh / ohne |
| 2 | 16:12 | 6,50 | 50 | 6,85 | 548 | 5,16 | 68 | — | 12,6 | schwach | roh / ohne |
| 3 | 16:20 | 6,50 | 100 | 6,86 | 559 | 4,94 | 72 | — | 12,6 | schwach | roh / ohne |
| 4 | 16:30 | 6,50 | 150 | 6,88 | 562 | 4,98 | 74 | — | 12,5 | schwach | roh / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 79A / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 16:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +27 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*[1] $V_M = \pi * (D/2)^2 * 1/100$, [2] bToC = Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 80A |
| Location | Bismarck Kaserne Kastellaun |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,58 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 200 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14:00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 20 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:20 | 13,58 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 17:25 | 14,01 | 50 | 6,85 | 548 | 4,62 | 78 | — | 12,6 | klar | farblos / ohne |
| 3 | 17:30 | 14,11 | 100 | 6,82 | 555 | 4,44 | 74 | — | 12,5 | klar | farblos / ohne |
| 4 | 17:40 | 14,16 | 200 | 6,88 | 562 | 4,28 | 76 | — | 12,6 | klar | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 80A / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 17:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*(½*BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 81 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sapcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | 10,95 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (PV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xPV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 13,50 |
| Date | 28.06.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (Uhrzeit) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:20 | 10,95 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:25 | 11,22 | 50 | 6,62 | 436 | 4,62 | 103 | — | 12,3 | klar | farblos / ohne |
| 3 | 15:30 | 11,45 | 100 | 6,61 | 456 | 4,54 | 101 | — | 12,4 | klar | farblos / ohne |
| 4 | 15:40 | 11,54 | 200 | 6,63 | 461 | 4,55 | 106 | — | 12,4 | klar | farblos / ohne |
| 5 | 15:50 | 11,61 | 300 | 6,59 | 458 | 4,51 | 108 | — | 12,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM81A / 28.06.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.06.25 / 15:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | | Air Temperature | |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

[1]VM=π*((BD/1000)/2)^2*1000, [2]bToC = Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM82A |
| Location | Bismarck Kaserne Kottenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m b.TOC*) (SWL) | 15,23 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bTOC*) | 20,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bTOC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 14:00 | 15,23 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 14:05 | 15,58 | 50 | 6,88 | 646 | 5,16 | 93 | — | 12,4 | klar | farblos / ohne |
| 3 | 14:10 | 15,63 | 100 | 6,84 | 641 | 5,08 | 93 | — | 2,3 | klar | farblos / ohne |
| 4 | 14:20 | 15,65 | 200 | 6,86 | 640 | 5,09 | 92 | — | 12,2 | klar | farblos / ohne |
| 5 | 14:20 | 15,66 | 300 | 6,86 | 638 | 5,08 | 91 | — | 12,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM82A / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | Regen | Air Temperature | +21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*) Meter (V-BD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 84 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Sapcifications & Measurament | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,90 |
| Volume per Meter (lm) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | 11,76 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[2]) | 18,00 |
| Date | 28.08.25 |
| Duration of Purging (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (Uhrzeit) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:40 | 11,76 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:45 | 12,99 | 50 | 6,81 | 460 | 4,61 | 90 | — | 12,1 | klar | farblos / ohne |
| 3 | 12:50 | 13,31 | 100 | 6,82 | 450 | 4,39 | 90 | — | 12,0 | klar | farblos / ohne |
| 4 | 13:00 | 13,44 | 200 | 6,81 | 446 | 4,37 | 87 | — | 12,0 | klar | farblos / ohne |
| 5 | 13:10 | 13,51 | 300 | 6,83 | 442 | 4,38 | 86 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84A / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 13:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +20° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Odour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] VM=π*((½*BD)²)/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 84B |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,68 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 16,35 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=3xWC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:20 | 16,35 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:25 | 18,06 | 50 | 6,89 | 481 | 4,45 | 176 | — | 12,6 | klar | farblos / ohne |
| 3 | 13:30 | 18,71 | 100 | 6,90 | 472 | 4,42 | 81 | — | 12,6 | klar | farblos / ohne |
| 4 | 13:40 | 19,11 | 200 | 6,88 | 470 | 4,39 | 82 | — | 12,7 | klar | farblos / ohne |
| 5 | 13:50 | 19,28 | 300 | 6,88 | 469 | 4,38 | 84 | — | 12,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 84B / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 13:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | |
| Weather | Regen | Air Temperature | + 21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=π*(ID/2)²*1000, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773624 |

| Well Details | |
|---|---|
| Well No. | GWM 851 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,83 |
| Volume per Meter (ltrs) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 9,71 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 18,00 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17:50 | 9,71 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 17:55 | 9,93 | 50 | 6,65 | 823 | 4,86 | 71 | — | 12,1 | klar | farblos / ohne |
| 3 | 18:00 | 10,12 | 100 | 6,69 | 811 | 4,18 | 83 | — | 12,1 | klar | farblos / ohne |
| 4 | 18:10 | 10,26 | 200 | 6,67 | 806 | 4,24 | 86 | — | 12,1 | klar | farblos / ohne |
| 5 | 18:20 | 10,29 | 300 | 6,69 | 799 | 4,28 | 83 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 851 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 18:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~ 21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=π*((¼*BD)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Sapcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:20 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 10:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | — |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=(π*(BD)²)/4000, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM87 |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurment | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (ltr) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 10:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | N1 |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

Meßstelle trocken

[redacted]

*VM=π*(¼*BD)²/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM[1]) | — |
| Static Water Level (m bToC[2]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 7,14 | — | 6,81 | 1651 | 4,38 | 176 | — | 15,0 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 10:00 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC documents) | | kühl |
| Weather | bedeckt | Air Temperature | 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1]VM=π*((%*BD)÷2)²/100, [2]Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 89 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | 7,95 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 9:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

keine PN möglich, Wasserstand nicht ausreichend

[redacted]

*VM=(π*(½*BD)²)/1000, *Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778.24 |

| Well Details | |
|---|---|
| Well No. | GWM 90 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:40 | Leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 10:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kl |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc..)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/100, *bToC Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 91 |
| Location | Bismarck Kaserne Kattenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK |
| Volume per Meter (ltrs) (VM') | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 28.08.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. — |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:40 | 5,11 (POK) | — | 7,22 | 729 | 5,01 | 72 | — | 14,9 | klare | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| CDC # | | | |
|---|---|---|---|
| Sample Name | GWM 91 / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 9:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | bedeckt | Air Temperature | + 19° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=ltr*(π*BD)²/400, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kottenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 19,33 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,68 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 28.08.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:40 | 14,68 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 16:45 | 14,84 | 50 | 6,65 | 823 | 4,91 | 447 | — | 12,1 | klar | farblos / ohne |
| 3 | 16:50 | 14,98 | 100 | 6,69 | 806 | 4,48 | 54 | — | 12,1 | klar | farblos / ohne |
| 4 | 17:00 | 15,11 | 200 | 6,71 | 804 | 4,42 | 55 | — | 12,0 | klar | farblos / ohne |
| 5 | 17:10 | 15,11 | 300 | 6,72 | 799 | 4,28 | 60 | — | 12,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 92A / 28.08.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 28.08.25 / 17:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +21° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*) VM=π*((½*BD)²)/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM32 |
| Location | Bismarck Kasorne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,76 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[2] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | |
| 1 | 10:10 | 24,04 | — | 6,88 | 931 | 4,90 | 158 | — | 11,5 | klar | fault bis / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM32/25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 10:30 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*[1] VM=π*((ID/2)²)/1000, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction*

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778241 |

| Well Details | |
|---|---|
| Well No. | GWM 38 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,85 |
| Volume per Meter (l/m) (VM)[1] | — |
| Static Water Level (m bToC[2]) (SWL) | 12,02 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[2]) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[2]) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:35 | 12,02 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 15:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

[1] VM=π*(½*BD)²/100, [2] below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246773241 |

| Well Details | |
|---|---|
| Well No. | GWM39 |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,82 |
| Volume per Meter (l/m) (V/M) | — |
| Static Water Level (m bToC*) (SWL) | 5,76 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=V/M*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:10 | 5,76 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 15:15 | 5,85 | 50 | 7,11 | 508 | 4,48 | 98 | — | 11,1 | klar | farblos / ohne |
| 3 | 15:20 | 5,91 | 100 | 7,02 | 506 | 4,59 | 99 | — | 11,4 | klar | farblos / ohne |
| 4 | 15:30 | 5,93 | 200 | 7,04 | 522 | 4,66 | 104 | — | 11,4 | klar | farblos / ohne |
| 5 | 15:40 | 5,94 | 300 | 7,06 | 531 | 4,78 | 108 | — | 11,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM39 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 15:40 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*[1] VM=(π*(½*BD)²)/100, [2] Below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM40 |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 15,05 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 8,14 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 14,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:50 | 8,14 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:55 | 8,30 | 50 | 6,94 | 872 | 3,96 | 102 | — | 11,4 | klar | farblos / ohne |
| 3 | 19:00 | 8,39 | 100 | 6,92 | 861 | 3,97 | 101 | — | 11,3 | klar | farblos / ohne |
| 4 | 19:10 | 8,47 | 200 | 6,91 | 859 | 3,87 | 106 | — | 11,3 | klar | farblos / ohne |
| 5 | 19:20 | 8,53 | 300 | 6,93 | 856 | 3,86 | 104 | — | 11,3 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM40 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 19:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

+ Probe GWM40 / 25.09.25
QA / QC

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 170 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,71 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=WC*VM) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Probe Reset |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:10 | 17,54 | — | 6,64 | 503 | 4,96 | 152 | — | 11,3 | klar | Bubble Volume |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM170 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 9:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=(π*(BD)²)/4000, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 71 |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 23,59 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 12,07 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 700 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 20,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:50 | 12,07 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:54 | 12,35 | 50 | 6,81 | 421 | 2,61 | 124 | — | 10,9 | klar | farblos / ohne |
| 3 | 13:00 | 12,39 | 100 | 6,76 | 416 | 2,56 | 122 | — | 11,0 | klar | farblos / ohne |
| 4 | 13:10 | 12,45 | 200 | 6,77 | 410 | 2,52 | 126 | — | 11,0 | klar | farblos / ohne |
| 5 | 13:20 | 12,51 | 300 | 6,78 | 417 | 2,52 | 128 | — | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM71/25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

+ Probe GWM71/25.09.25
QA/QC

*VM=π*(ID*SD)²/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 72 |
| Location | Bismarck Kaserne Katterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,45 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 12,88 |
| Water Column (m) (WC=WD-SWL) | — |
| Rückpumpvolumen (l) (RV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xSV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15:25 | 12,88 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
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| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sampler Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 15:25 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur Rkst und Endtiefe gemessen

[redacted]

*VM=(π*(BD/2)²)/100, *Below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM73 |
| Location | Bismarck Kaserne Kelterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,91 |
| Volume per Meter (l/m) (VM') | — |
| Static Water Level (m bToC*) (SWL) | 5,96 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM'*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:00 | 5,96 | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
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| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 16:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | belecht | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

nur RWS und Endtiefe gemessen

[redacted]

*VM=(π*(0,5*BD)²)/100, *Below Top of Casing, [2]Electrolytic Conductivity, [3]Dissolved Oxygen, [4]Ag/AgCl-Electrode, [5]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 1021 |
| Project Number | 216773624 |

| Well Details | |
|---|---|
| Well No. | GKM78A |
| Location | Bismarck Kaserne Kötterbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | — |
| Volume per Metre (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abstampfvolumen (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| V-N. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe/Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:10 | 12,46 | — | 6,82 | 889 | 4,45 | 149 | — | 12,8 | klar | farblos/ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GKM78A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 10:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | M |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1] Meter ("+" BOH)/100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction

Created by Fieldtrakker

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 78 B |
| Location | Bismarck Kaserne Kaiserbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 16,82 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,68 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xSV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 15,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14:20 | 13,68 | start | — | — | — | — | — | — | schwach | leben / ohne |
| 2 | 14:25 | 13,96 | 50 | 6,99 | 862 | 4,81 | 129 | — | 11,4 | klar | farblos / ohne |
| 3 | 14:35 | 14,01 | 100 | 7,02 | 852 | 4,86 | 124 | — | 11,3 | klar | farblos / ohne |
| 4 | 14:45 | 14,06 | 200 | 7,02 | 856 | 4,87 | 127 | — | 11,2 | klar | farblos / ohne |
| 5 | 14:55 | 14,08 | 300 | 7,03 | 859 | 4,92 | 128 | — | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 78 B / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 14:55 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

*VM=(π*(ID/2)²)/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 79 A |
| Location | Bismarck Kaserne Kamenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 6,97 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 5,91 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | ca. 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | ~10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 6,50 |
| Date | 25.09.25 |
| Duration of Pumping (min) | ca. 20 |
| Purged by | K.A |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:10 | 5,91 | start | — | — | — | — | — | — | schwach | trüb / braun |
| 2 | 16:17 | 6,50 | 50 | 6,89 | 686 | 3,69 | 103 | — | 11,2 | schwach | trüb / braun |
| 3 | 16:25 | 6,50 | 100 | 6,88 | 709 | 3,72 | 36 | — | 11,1 | klar | farblos / braun |
| 4 | 16:35 | 6,50 | 150 | 6,88 | 715 | 3,74 | 33 | — | 11,1 | klar | farblos / braun |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM79A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~1 + 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 80A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,63 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 13,66 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (3V=VM*WC) | 150 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2x3V) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | Comet pumpe |
| Pump Intake Depth (m bToC*) | 14,50 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 15 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Observations |
| 1 | 17:35 | 13,66 | start | — | — | — | — | — | — | mittel | schwach / ohne |
| 2 | 17:40 | 14,01 | 50 | 6,77 | 501 | 3,86 | 99 | — | 12,1 | schwach | schwach / ohne |
| 3 | 17:45 | 14,15 | 100 | 6,76 | 496 | 3,04 | 96 | — | 12,0 | schwach | schwach / ohne |
| 4 | 17:50 | 14,25 | 150 | 6,74 | 492 | 2,96 | 96 | — | 12,0 | farblos | farblos / ohne |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 80A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 17:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(½*BD)²]/100, *below Top of Casing, [1]Electrolytic Conductivity, [2]Dissolved Oxygen, [3]Ag/AgCl-Electrode, [4]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 811 |
| Location | Bismarck Kaserne Kattorbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 14,90 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,15 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=(WC*VM)*3) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,50 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13:35 | 11,15 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 13:40 | 11,44 | 50 | 6,78 | 412 | 4,92 | 108 | — | 11,0 | klar | farblos / ohne |
| 3 | 13:45 | 11,69 | 100 | 6,79 | 420 | 4,86 | 111 | — | 11,0 | klar | farblos / ohne |
| 4 | 13:55 | 11,78 | 200 | 6,76 | 422 | 4,81 | 112 | — | 11,1 | klar | farblos / ohne |
| 5 | 14:05 | 11,85 | 300 | 6,77 | 421 | 4,76 | 112 | — | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 811 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 14:05 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 1x1 |
| Weather | bedeckt | Air Temperature | + 11,0 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*V-M=(π*(¼*BD)²)/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM 32 A |
| Location | Bismarck Kaserne Ketterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 24,23 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | 15,38 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC[1]) | 20,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Pumped by | K.A. |

**Field Parameters**

| Vol | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12:05 | 15,38 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 12:10 | 15,71 | 50 | 6,95 | 665 | 4,52 | 102 | — | 11,6 | klar | farblos / ohne |
| 3 | 12:15 | 15,76 | 100 | 6,92 | 626 | 4,37 | 106 | — | 11,7 | klar | farblos / ohne |
| 4 | 12:25 | 15,79 | 200 | 6,91 | 611 | 4,31 | 99 | — | 11,6 | klar | farblos / ohne |
| 5 | 12:35 | 15,81 | 300 | 6,91 | 609 | 4,26 | 98 | — | 11,7 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM 32 A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 12:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | kühl |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

[1] Meters below Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 84A |
| Location | Bismarck Kaserne Kastenbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 17,90 |
| Volume per Meter (lm) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 11,90 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 13,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11:20 | 11,90 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 11:25 | 12,09 | 50 | 6,91 | 421 | 4,52 | 112 | — | 11,0 | klar | farblos / ohne |
| 3 | 11:30 | 12,51 | 100 | 6,86 | 406 | 4,57 | 106 | — | 11,1 | klar | farblos / ohne |
| 4 | 11:40 | 12,65 | 200 | 6,86 | 401 | 4,58 | 101 | — | 11,0 | klar | farblos / ohne |
| 5 | 11:50 | 12,77 | 300 | 6,85 | 399 | 4,62 | 97 | — | 11,0 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 84A / 250925 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 11:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | ~10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*VM=[π*(WD/2)²]*100, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

[redacted]

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778624 |

| Well Details | |
|---|---|
| Well No. | GWM 341B |
| Location | Bismarck Kaserne Kaiserslautern |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 25,66 |
| Volume per Meter (lm) (VM*) | — |
| Static Water Level (m bToC*) (SWL) | 16,46 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 22,00 |
| Date | 25.09.25 |
| Duration of Purging (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:40 | 16,46 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 10:45 | 16,11 | 50 | 6,81 | 481 | 3,72 | 124 | — | 11,1 | klar | farblos / ohne |
| 3 | 10:50 | 13,82 | 100 | 6,86 | 472 | 3,61 | 120 | — | 11,2 | klar | farblos / ohne |
| 4 | 11:00 | 19,25 | 200 | 6,84 | 466 | 3,55 | 114 | — | 11,2 | klar | farblos / ohne |
| 5 | 11:10 | 19,41 | 300 | 6,85 | 461 | 3,48 | 112 | — | 11,2 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM341B / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 11:10 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | Nein |
| Weather | bedeckt | Air Temperature | + 10° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odur, etc.)

**Notes**

[redacted]

*VM=[π*(ID/2)²]/1000 **Below Top of Casing, [3]Electrolytic Conductivity, [4]Dissolved Oxygen, [5]Ag/AgCl-Electrode, [6]Redox-Potential after Correction

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 2416778241 |

| Well Details | |
|---|---|
| Well No. | GWM85A |
| Location | Bismarck Kaserne Kattarbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 17,83 |
| Volume per Meter (l/m) (V/M) | — |
| Static Water Level (m bToC*) (SWL) | 9,87 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=WC*V/M*3) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 16,00 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A. |

**Field Parameters**

| Vol | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[3] (µS/cm) | D.O.[4] (mg/L) | Redox[5] (mV) | Redox[6] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18:05 | 9,87 | start | — | — | — | — | — | — | klar | farblos / ohne |
| 2 | 18:10 | 10,05 | 50 | 6,74 | 1766 | 4,62 | 117 | — | 11,3 | klar | farblos / ohne |
| 3 | 18:15 | 10,23 | 100 | 6,74 | 1774 | 4,71 | 116 | — | 11,3 | klar | farblos / ohne |
| 4 | 18:25 | 10,36 | 200 | 6,72 | 1776 | 4,51 | 115 | — | 11,4 | klar | farblos / ohne |
| 5 | 18:35 | 10,41 | 300 | 6,71 | 1780 | 4,44 | 114 | — | 11,4 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM85A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 18:35 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | leicht | Air Temperature | + 17° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*[1] V Mehr=((r*3D)^2)*PI*100, [2] Below Top of Casing, [3] Electrolytic Conductivity, [4] Dissolved Oxygen, [5] Ag/AgCl-Electrode, [6] Redox-Potential after Correction*

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 1021 |
| Project Number | 21677824 |

| Well Details | |
|---|---|
| Well No. | GWM86 |
| Location | Bismarck, Kaiserin Kathrinpark |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VPM) | — |
| Static Water Level (m bToC)[1] (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (PV=VPM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xPV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10:00 | 6,97 | — | 6,88 | 561 | 5,03 | 162 | — | 15,5 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM86 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 10:00 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 24 |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[1] Meter to Top of Casing, [2] Electrolytic Conductivity, [3] Dissolved Oxygen, [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

Created by Filedmotion

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAF [illegible] |
| Project Number | 246774614 |

| Well Details | |
|---|---|
| Well No. | GWM87 |
| Location | Bietigheim Kaserne Kurfürstin |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC[1]) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Abstromvolumen (l) (3V=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3x3V) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC[1]) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC[1]) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:50 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

| Sampling Information | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 9:50 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | — |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

| Notes |
|---|
| Meßstelle trocken |

[1] m bToC (m Below Top of Casing), [2] EC (Electrolytic Conductivity), [3] DO (Dissolved Oxygen), [4] Ag/AgCl-Electrode, [5] Redox-Potential after Correction

Created by Pastinaka

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAL 2024 |
| Project Number | 2016774824 |

| Well Details | |
|---|---|
| Well No. | GWM 88 |
| Location | Bernsee, Kyberne Kohlerloch |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 8,00 (40k) |
| Volume per Meter (l/m) (VPM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=TWD-SWL) | — |
| Abpumpvolumen (l) (3V=VPM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3V/2) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Foam / Gerud |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:40 | 7,30 | — | 6,86 | 1620 | 4,41 | 107 | — | 12,1 | klar | foamla / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM88 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 9:40 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | 101 |
| Weather | bedeckt | Air Temperature | + 10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*) Mostly: °) BDHT100, "Below Top of Casing, "Electrolytic Conductivity, "Dissolved Oxygen, "Ag/AgCl-Electrode, "Redox-Potential after Correction

Created by Permasos

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | DCAN 1041 |
| Project Number | 246772224 |

| Well Details | |
|---|---|
| Well No. | GWM89 |
| Location | Bahnhof Kaserne Kotterbach |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (TWD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=TWD-SWL) | — |
| Approximate Volume (l) (DV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (=3xDV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC*) | — |
| Date | 25.09.25 |
| Duration of Purging (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (Hh:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.* (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Foul2 / Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9:30 | leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 9:30 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC documents) | | Kühl |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

*Viton (VI) *BD (BD) *TWD (TWD) *Below Top of Casing *Electrolytic Conductivity *Dissolved Oxygen *Ag/AgCl-Electrode *Redox-Potential after Correction

Created by Fieldtechs

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 2021 |
| Project Number | 246778221 |

| Well Details | |
|---|---|
| Well No. | GWM90 |
| Location | Biomasse Kaserne Kottenbach |
| Coordinates | |

| Well Sepcifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 8,00 (GOK) |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | — |
| Water Column (m) (WC=WD-SWL) | — |
| Absolute Volume (l) (BV=VM*WC) | — |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | — |
| Pumping Rate (l/min) | — |
| Purge Method | — |
| Pump Intake Depth (m bToC) | — |
| Date | 25.09.25 |
| Duration of Pumping (min) | — |
| Purged by | K.A. |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C.[1] (µS/cm) | D.O.[2] (mg/L) | Redox[3] (mV) | Redox[4] (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 10:20 | Leer | — | — | — | — | — | — | — | — | — |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 10:20 | Sampled by | K.A. |
| Preservation | 4°C (see sample labels and/or CoC document) | | 11 |
| Weather | bedeckt | Air Temperature | +10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

Meßstelle trocken

*WM=Well; *BGRP100, *Below Top of Casing; *Electrolytic Conductivity; *Dissolved Oxygen; *Ag/AgCl-Electrode; *Redox-Potential after Correction

Created by Parkmaker

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | OCAH 2021 |
| Project Number | 246778241 |

| Well Details | |
|---|---|
| Well No. | GWM91 |
| Location | Bismarck Kaserne Karlsruhe |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | ~ |
| Casing Diameter (mm) (CD) | ~ |
| Total Well Depth (m) (TWD) | 8,00 (GOK) |
| Volume per Meter (m) (VM) | ~ |
| Static Water Level (m bToC*) (SWL) | ~ |
| Water Column (m) (WC=TWD-SWL) | ~ |
| Abpumpvolumen (l) (3V>1xTWC) | ~ |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~3x3V) | ~ |
| Pumping Rate (l/min) | ~ |
| Purge Method | ~ |
| Pump Intake Depth (m bToC*) | ~ |
| Date | 25.09.25 |
| Duration of Pumping (min) | ~ |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | pH | E.C. (µS/cm) | D.O.* (mg/L) | Redox* (mV) | Redox* (mV) | Water Temp. (°C) | Turbidity | Farbe / Geruch |
| 1 | 9:20 | 5,23 (OK) | — | 6,85 | 515 | 4,85 | 166 | — | 14,8 | klar | farblos / ohne |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| COC # | | | |
|---|---|---|---|
| Sample Name | GWM91 / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / 9:20 | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | 21 |
| Weather | bedeckt | Air Temperature | + 10 |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

*) Meßpunkt (= BOK) TOC, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Elektrode, *Redox-Potential after Correction

Created by Fieldtools

# Groundwater Sampling Form

| Project | |
|---|---|
| Project Name | CCAN 104 |
| Project Number | 246778Z4 |

| Well Details | |
|---|---|
| Well No. | GWM 92A |
| Location | Bismarck Kaserne Kottenheim |
| Coordinates | |

| Well Specifications & Measurement | |
|---|---|
| Borehole Diameter (mm) (BD) | — |
| Casing Diameter (mm) (CD) | — |
| Total Well Depth (m) (WD) | 17,33 |
| Volume per Meter (l/m) (VM) | — |
| Static Water Level (m bToC*) (SWL) | 14,90 |
| Water Column (m) (WC=WD-SWL) | — |
| Abpumpvolumen (l) (BV=VM*WC) | 300 |

| Purging Information | |
|---|---|
| Min Purge Volume (l) (~2xBV) | |
| Pumping Rate (l/min) | 10 |
| Purge Method | SQ3 |
| Pump Intake Depth (m bToC*) | 17,50 |
| Date | 25.09.25 |
| Duration of Pumping (min) | 30 |
| Purged by | K.A |

**Field Parameters**

| Vol. | Time (HH:mm) | Water Level (m bToC*) | Volume Removed (l) | Measured Parameters: pH | E.C.[2] (µS/cm) | D.O.[3] (mg/L) | Redox[4] (mV) | Redox[5] (mV) | Water Temp. (°C) | Turbidity | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16:50 | 14,90 | start | — | — | — | — | — | — | schwach | wolkig / ohne |
| 2 | 16:55 | 15,09 | 50 | 7,01 | 1044 | 4,46 | 82 | — | 12,1 | schwach | wolkig / ohne |
| 3 | 17:00 | 15,24 | 100 | 6,97 | 1066 | 4,55 | 83 | — | 12,2 | schwach | wolkig / ohne |
| 4 | 17:10 | 15,35 | 200 | 6,96 | 1061 | 4,49 | 86 | — | 12,1 | klar | farblos / ohne |
| 5 | 17:20 | 15,43 | 300 | 6,95 | 1056 | 4,52 | 86 | — | 12,1 | klar | farblos / ohne |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |

**Sampling Information**

| | | | |
|---|---|---|---|
| COC # | | | |
| Sample Name | GWM 92A / 25.09.25 | Sampling Method | Pump Sample |
| Sampling Date & Time | 25.09.25 / | Sampled by | K.A |
| Preservation | 4°C (see sample labels and/or CoC document) | | |
| Weather | bedeckt | Air Temperature | + 11° |
| Parameters | s. CoC | | |
| Containers | s. CoC | | |

Appearance of Sample (Colour, Turbidity, Sediment, Odor, etc.)

**Notes**

[redacted]

*VM=[π*(½*BD)²]/1000, *Below Top of Casing, *Electrolytic Conductivity, *Dissolved Oxygen, *Ag/AgCl-Electrode, *Redox-Potential after Correction

[redacted]

D.2 off-post wells

D.2 Messstellen off-post

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 16.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 01 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von . bis . | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 9,97 | + 14° sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min. | nach 10 min. | nach 15 min. | nach 20 min. | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 16:05 | 16:10 | 16:20 | 16:30 | |
| Stand d. Wasseruhr (cbm) | / | / | / | / | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 10,47 | 10,96 | 11,21 | 11,41 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,6 | 12,1 | 12,0 | 11,9 | |
| elektrische Leitfähigkeit (25° C) | 409 | 410 | 413 | 414 | |
| pH-Wert | 6,66 | 6,64 | 6,65 | 6,64 | |
| Sauerstoffgehalt [mg/l] | 3,90 | 4,30 | 3,70 | 3,60 | |
| Redox-Spannung [mV] | -25 | -26 | -26 | -23 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr.: Kuttenbach

Datum: 17.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 02 | [redacted] | |

**4. Art der Entnahmestelle**
- ☐ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☐ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| mm | Soll: . Ist: 24,72 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 6,60 | +13° / sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 17:35 | 17:40 | 17:50 | 18:00 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 6,90 | 6,95 | 6,97 | 6,98 | |
| Probenahme | ☐ | ☐ | ☐ | ☐ | ☐ |
| Wassertemperatur [°C] | 12,0 | 11,8 | 11,8 | 11,7 | |
| elektrische Leitfähigkeit (25° C) | 297 | 304 | 301 | 306 | |
| pH-Wert | 7,10 | 7,02 | 7,04 | 7,01 | |
| Sauerstoffgehalt [mg/l] | 3,20 | 3,15 | 3,25 | 3,30 | |
| Redox-Spannung [mV] | -31 | -30 | -29 | -30 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Katterbach

Datum: 16.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 03 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,33 | von bis . | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe ☐ aus laufender Sanierung
- ☐ geschöpfte Probe ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe ☒ Unterwasserpumpe
- ☐ Schöpfkelle ☐ sonstige:

**13. Material Steigrohr:**
☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:**
☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 7,52 | 15° / sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 15:20 | 15:25 | 15:35 | 15:45 | |
| Stand d. Wasseruhr (cbm) | / | / | / | / | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,70 | 7,79 | 7,85 | 7,88 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,5 | 12,1 | 12,0 | 12,0 | |
| elektrische Leitfähigkeit (25° C) | 358 | 369 | 372 | 373 | |
| pH-Wert | 7,06 | 7,03 | 7,01 | 6,99 | |
| Sauerstoffgehalt [mg/l] | 4,20 | 3,75 | 3,50 | 3,40 | |
| Redox-Spannung [mV] | -31 | -30 | -31 | -30 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

| **Probenahmeprotokoll:**<br>**Grund-/Oberflächenwasser** | |
|---|---|

| Projektname / Nr. | |
|---|---|
| Datum: 22.10.24 | Datum Übergabe Labor: ☒ gekühlt ☒ dunkel |

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 03 | [redacted] | |

| 4. Art der Entnahmestelle | 5. Mess-Referenzpunkt | 6. Kontrollmessung | | |
|---|---|---|---|---|
| | | Param. | soll: | ist |
| ☒ GW-Messstelle / Beobachtungspegel | ☒ Pegeloberkante (POK) | | | |
| ☐ Brunnen mit fest eingebauter Pumpe | ☐ Geländeoberkante (GOK) | | | |
| ☐ Sanierungspegel | ☐ Schachtoberkante (SOK) | | | |
| ☐ unausgebaute Bohrung | ☐ | | | |
| ☐ sonstige:: | | | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,33 | von bis . | m ü. NN |

| 11. Art der Entnahme: | 12. Entnahmegerät: |
|---|---|
| ☒ gepumpte Probe ☐ aus laufender Sanierung | ☐ Saugpumpe ☒ Unterwasserpumpe |
| ☐ geschöpfte Probe ☐ sonstige: | ☐ Schöpfkelle ☐ sonstige: |

| 13. Material Steigrohr: | 14. Material Schlauch: |
|---|---|
| ☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt | ☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi |

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 17,58 | +13°/bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 11:55 | 12:00 | 12:10 | 12:20 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s [x] l/min | 10 | 10 | 10 | 10 | |
| Wasserspiegel u. Ansatzpunkt (m) | 8,30 | 9,45 | 9,90 | 10,39 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,1 | 12,0 | 12,0 | 12,0 | |
| elektrische Leitfähigkeit (25° C) | 388 | 391 | 382 | 385 | |
| pH-Wert | 6,86 | 6,53 | 6,55 | 6,56 | |
| Sauerstoffgehalt [mg/l] | 4,80 | 4,20 | 4,75 | 4,70 | |
| Redox-Spannung [mV] | −43 | −42 | −39 | −38 | |
| Färbung | schwach | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

19. Probengefäße / Stabilisierung

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

| 20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp) | | | | | |
|---|---|---|---|---|---|
| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 21.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| BH Post 02 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,78 | von bis . | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:**
☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C)/ Witterung |
|---|---|---|
| 20,00 | 6,63 | + 13°/ sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 17:10 | 17:15 | 17:25 | 17:35 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s · [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 6,97 | 6,96 | 6,97 | 6,98 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,3 | 11,9 | 11,5 | 11,4 | |
| elektrische Leitfähigkeit (25° C) | 308 | 318 | 316 | 321 | |
| pH-Wert | 7,041 | 6,99 | 6,98 | 6,99 | |
| Sauerstoffgehalt [mg/l] | 3,40 | 3,20 | 3,15 | 3,10 | |
| Redox-Spannung [mV] | −37 | −38 | −37 | −37 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas ml | ml | ☐ Grünglas ml | ml | ☒ PE-Flasche 100 ml | ml | ☐ HS ml | ☐ ml | ☐ ml | ☐ Flaschensatz (divers) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

**21. Sonstige Bemerkungen**

**22. Unterschrift**

[redacted]

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 22.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OffPost 01 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von . bis . | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 10,414 | +11° / sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 8:40 | 8:45 | 8:55 | 9:05 | |
| Stand d. Wasseruhr (cbm) | / | / | / | / | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 10,95 | 11,16 | 11,38 | 11,52 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,0 | 11,8 | 11,7 | 11,7 | |
| elektrische Leitfähigkeit (25° C) | 214 | 210 | 212 | 209 | |
| pH-Wert | 6,71 | 6,72 | 6,71 | 6,71 | |
| Sauerstoffgehalt [mg/l] | 3,60 | 3,60 | 3,50 | 3,55 | |
| Redox-Spannung [mV] | -30 | -29 | -31 | -32 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 29.10.24 | Datum Übergabe Labor: ☑ gekühlt ☑ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| Off Post 02 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige:

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,78 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe ☐ aus laufender Sanierung
- ☐ geschöpfte Probe ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe ☒ Unterwasserpumpe
- ☐ Schöpfkelle ☐ sonstige:

**13. Material Steigrohr:**
☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:**
☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 10,00 | 6,66 | + 10° / bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 8:05 | 8:10 | 8:20 | 8:30 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s [x] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 6,94 | 6,97 | 6,98 | 6,99 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 12,0 | 11,8 | 11,8 | 11,8 | |
| elektrische Leitfähigkeit (25° C) | 321 | 309 | 299 | 298 | |
| pH-Wert | 6,98 | 6,99 | 6,97 | 6,96 | |
| Sauerstoffgehalt [mg/l] | 3,60 | 3,40 | 3,55 | 3,45 | |
| Redox-Spannung [mV] | -31 | -29 | -28 | -25 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kuttenbach

Datum: 29.10.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 01 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe ☐ aus laufender Sanierung
- ☐ geschöpfte Probe ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe ☒ Unterwasserpumpe
- ☐ Schöpfkelle ☐ sonstige:

**13. Material Steigrohr:**
☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:**
☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 10,76 | +11° / sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 9:05 | 9:10 | 9:20 | 9:30 | |
| Stand d. Wasseruhr (cbm) | - | - | - | - | |
| Förderstrom [ ] l/s [X] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 11,13 | 11,32 | 11,49 | 11,62 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,1 | 11,9 | 11,9 | 11,8 | |
| elektrische Leitfähigkeit (25° C) | 300 | 261 | 244 | 234 | |
| pH-Wert | 6,80 | 6,75 | 6,73 | 6,74 | |
| Sauerstoffgehalt [mg/l] | 3,75 | 3,65 | 3,40 | 3,35 | |
| Redox-Spannung [mV] | -26 | -26 | -24 | -23 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 04.11.21 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 01 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe ☐ aus laufender Sanierung
- ☐ geschöpfte Probe ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe ☒ Unterwasserpumpe
- ☐ Schöpfkelle ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C)/ Witterung |
|---|---|---|
| 20,00 | 10,87 | +9° sonnig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 16:30 | 16:35 | 16:45 | 16:55 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s · [x] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 11,31 | 11,49 | 11,63 | 11,74 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,5 | 11,4 | 11,3 | 11,3 | |
| elektrische Leitfähigkeit (25° C) | 396 | 371 | 369 | 373 | |
| pH-Wert | 6,75 | 6,74 | 6,72 | 6,76 | |
| Sauerstoffgehalt [mg/l] | 3,95 | 3,85 | 3,75 | 3,70 | |
| Redox-Spannung [mV] | -31 | -36 | -32 | -34 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 200 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kutterbach

Datum: 05.11.24 | Datum Übergabe Labor: | ☑ gekühlt ☑ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 02 | [redacted] | |

**4. Art der Entnahmestelle**
- ☑ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☑ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,72 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☑ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☑ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☑ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C) / Witterung |
|---|---|---|
| 20,00 | 6,69 | +3° / wolkig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 8:20 | 8:25 | 8:35 | 8:45 | |
| Stand d. Wasseruhr (cbm) | – | – | – | – | |
| Förderstrom [ ] l/s · [☑] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,07 | 7,01 | 7,02 | 7,02 | |
| Probenahme | ☐ | ☐ | ☐ | ☑ | ☐ |
| Wassertemperatur [°C] | 11,5 | 11,4 | 11,2 | 11,3 | |
| elektrische Leitfähigkeit (25° C) | 296 | 301 | 299 | 292 | |
| pH-Wert | 7,05 | 7,03 | 6,96 | 6,97 | |
| Sauerstoffgehalt [mg/l] | 3,60 | 3,25 | 3,15 | 3,05 | |
| Redox-Spannung [mV] | –41 | –44 | –42 | –40 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☑ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr.: Kattenbach

Datum: 05.11.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OK1 Post 03 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ∅ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,36 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C)/ Witterung |
|---|---|---|
| 20,00 | 7,66 | +4 / neblig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 12.15 | 12:20 | 12:30 | 12:40 | |
| Stand d. Wasseruhr (cbm) | – | – | – | – | |
| Förderstrom [ ] l/s [☒] l/min | 10 | 10 | 10 | 10 | |
| Wasserspiegel u. Ansatzpunkt (m) | 8,66 | 9,12 | 9,71 | 9, | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,0 | 11,4 | 11,5 | 11,5 | |
| elektrische Leitfähigkeit (25° C) | 376 | 371 | 375 | 378 | |
| pH-Wert | 6,68 | 6,61 | 6,71 | 6,73 | |
| Sauerstoffgehalt [mg/l] | 4,25 | 4,20 | 4,10 | 4,15 | |
| Redox-Spannung [mV] | -40 | -38 | -34 | -33 | |
| Färbung | rötl. | farblos | farblos | farblos | |
| Trübung | schwach | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kutterbach

Datum: 05.12.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 1 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 11,62 | +3 / bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 10:05 | 10:10 | 10:20 | 10:30 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 11,96 | 12,14 | 12,34 | 12,45 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 10,6 | 11,5 | 11,6 | 11,6 | |
| elektrische Leitfähigkeit (25° C) | 365 | 385 | 387 | 387 | |
| pH-Wert | 6,61 | 6,65 | 6,64 | 6,65 | |
| Sauerstoffgehalt [mg/l] | 3,81 | 3,75 | 3,65 | 3,62 | |
| Redox-Spannung [mV] | −15 | −26 | −29 | −30 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenhard

Datum: | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 2 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige:

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,76 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C) / Witterung |
|---|---|---|
| 20,00 | 6,82 | +3° / bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 11:00 | 11:05 | 11:15 | 11:25 | |
| Stand d. Wasseruhr (cbm) | | | | | |
| Förderstrom [ ] l/s · [X] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,09 | 7,16 | 7,06 | 7,10 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 9,9 | 10,2 | 10,3 | 10,3 | |
| elektrische Leitfähigkeit (25° C) | 280 | 275 | 271 | 269 | |
| pH-Wert | 7,02 | 6,82 | 6,81 | 6,79 | |
| Sauerstoffgehalt [mg/l] | 3,65 | 3,11 | 3,90 | 3,92 | |
| Redox-Spannung [mV] | -73 | -74 | -76 | -72 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 05.12.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| Off Post 3 | [redacted] | |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,73 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 7,47 | +3° / bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 9:15 | 9:20 | 9:30 | 9:40 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s [X] l/min | 10 | 10 | 10 | 10 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,95 | 9,22 | 9,65 | 12,08 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,0 | 11,4 | 11,5 | 11,5 | |
| elektrische Leitfähigkeit (25° C) | 311 | 312 | 308 | 307 | |
| pH-Wert | 6,77 | 6,75 | 6,71 | 6,65 | |
| Sauerstoffgehalt [mg/l] | 4,46 | 4,28 | 4,23 | 4,15 | |
| Redox-Spannung [mV] | −36 | −34 | −28 | −24 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 250 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr.: Kattenbach

Datum: 12.02.25 | Datum Übergabe Labor: ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 1 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe ☐ aus laufender Sanierung
- ☐ geschöpfte Probe ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe ☒ Unterwasserpumpe
- ☐ Schöpfkelle ☐ sonstige:

**13. Material Steigrohr:** ☐ PVC-U ☐ PE-HD ☐ Stahl verzinkt

**14. Material Schlauch:** ☒ PVC ☐ Stoff ☐ Teflon ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 11,31 | + 2° / bedeckt |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 13:55 | 14:00 | 14:10 | 14:20 | |
| Stand d. Wasseruhr (cbm) | | | | | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 11,64 | 11,83 | 12,05 | 12,16 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,2 | 11,7 | 11,8 | 11,8 | |
| elektrische Leitfähigkeit (25° C) | 580 | 481 | 464 | 462 | |
| pH-Wert | 6,36 | 6,41 | 6,46 | 6,43 | |
| Sauerstoffgehalt [mg/l] | 4,65 | 4,25 | 4,15 | 4,10 | |
| Redox-Spannung [mV] | 81 | 42 | 31 | 26 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 12.02.25 | Datum Übergabe Labor: | ☐ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 2 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☐ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☐ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| mm | Soll: . Ist: 24,78 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 6,58 | + 2° / wolkig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 14:45 | 14:50 | 15:00 | 15:10 | |
| Stand d. Wasseruhr (cbm) | - | - | - | - | |
| Förderstrom [ ] l/s [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,06 | 7,09 | 7,11 | 7,18 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 10,3 | 10,5 | 10,6 | 10,6 | |
| elektrische Leitfähigkeit (25° C) | 581 | 476 | 478 | 472 | |
| pH-Wert | 6,82 | 6,78 | 6,75 | 6,71 | |
| Sauerstoffgehalt [mg/l] | 4,45 | 4,43 | 4,42 | 4,40 | |
| Redox-Spannung [mV] | 27 | 24 | 18 | 14 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas ml | ml | ☐ Grünglas ml | ml | ☒ PE-Flasche 100 ml | ml | ☐ HS ml | ☐ ml | ☐ ml | ☐ Flaschensatz (divers) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

**21. Sonstige Bemerkungen**

**22. Unterschrift**

[redacted]

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr:

Datum: 12.02.25 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH-Port3 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,33 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 7,61 | +2° / wolkig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 13:05 | 13:10 | 13:20 | 13:30 | |
| Stand d. Wasseruhr (cbm) | – | – | – | – | |
| Förderstrom [ ] l/s [☒] l/min | 10 | 10 | 10 | 10 | |
| Wasserspiegel u. Ansatzpunkt (m) | 8,17 | 8,34 | 8,67 | 9,98 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 11,2 | 11,5 | 11,5 | 11,5 | |
| elektrische Leitfähigkeit (25° C) | 325 | 331 | 336 | 341 | |
| pH-Wert | 6,41 | 6,79 | 6,82 | 6,85 | |
| Sauerstoffgehalt [mg/l] | 4,65 | 3,99 | 3,92 | 3,84 | |
| Redox-Spannung [mV] | 42 | 21 | 24 | 19 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas ml | ml | ☐ Grünglas ml | ml | ☒ PE-Flasche 100 ml | ml | ☐ HS ml | ☐ ml | ☐ ml | ☐ Flaschensatz (divers) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr.: Kattenbach

Datum: 11.07.24 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OffPost 1 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige:

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 25,02 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☒ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 12,10 | +7°/wolkig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 10:50 | 10:55 | 11:05 | 11:15 | |
| Stand d. Wasseruhr (cbm) | – | – | – | – | |
| Förderstrom [ ] l/s [x] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 12,38 | 12,55 | 12,69 | 12,77 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 10,6 | 10,4 | 10,3 | 10,3 | |
| elektrische Leitfähigkeit (25° C) | 321 | 324 | 328 | 331 | |
| pH-Wert | 6,71 | 6,71 | 6,70 | 6,70 | |
| Sauerstoffgehalt [mg/l] | 3,65 | 3,90 | 3,84 | 3,83 | |
| Redox-Spannung [mV] | 51 | 54 | 53 | 53 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kattenbach

Datum: 14.01.25 | Datum Übergabe Labor | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| OH Post 2 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige:

**5. Mess-Referenzpunkt**
- ☑ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,72 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$ (°C) / Witterung |
|---|---|---|
| 20,00 | 6,79 | +2° / neblig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 9:10 | 9:15 | 9:25 | 9:35 | |
| Stand d. Wasseruhr (cbm) | — | — | — | — | |
| Förderstrom [ ] l/s · [☒] l/min | 5 | 5 | 5 | 5 | |
| Wasserspiegel u. Ansatzpunkt (m) | 7,03 | 7,13 | 7,19 | 7,21 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 10,0 | 10,1 | 10,1 | 10,1 | |
| elektrische Leitfähigkeit (25° C) | 246 | 251 | 297 | 299 | |
| pH-Wert | 6,99 | 6,94 | 6,91 | 6,90 | |
| Sauerstoffgehalt [mg/l] | 4,05 | 3,92 | 3,81 | 3,79 | |
| Redox-Spannung [mV] | 61 | 44 | 38 | 37 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 100 ml | ml | ml | ml | ml | Flaschensatz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| . ( min) | . ( min) | ( min) | ( min) | . ( min) | . ( min) |
|---|---|---|---|---|---|

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

**Probenahmeprotokoll:**
**Grund-/Oberflächenwasser**

Projektname / Nr: Kuttenbach

Datum: 11.07.25 | Datum Übergabe Labor: | ☒ gekühlt ☒ dunkel

| 1. Entnahmestelle | 2. Probenehmer | 3. Projektbearbeiter |
|---|---|---|
| Off Post 3 | [redacted] | [redacted] |

**4. Art der Entnahmestelle**
- ☒ GW-Messstelle / Beobachtungspegel
- ☐ Brunnen mit fest eingebauter Pumpe
- ☐ Sanierungspegel
- ☐ unausgebaute Bohrung
- ☐ sonstige::

**5. Mess-Referenzpunkt**
- ☒ Pegeloberkante (POK)
- ☐ Geländeoberkante (GOK)
- ☐ Schachtoberkante (SOK)
- ☐

**6. Kontrollmessung**

| Param. | soll: | ist |
|---|---|---|
| | | |
| | | |
| | | |

| 7. Pegel ⌀ (mm) | 8. Pegel Endtiefe (m) | 9. Filterstrecke (m) | 10. Ansatzhöhe |
|---|---|---|---|
| 125 mm | Soll: . Ist: 24,33 | von bis | m ü. NN |

**11. Art der Entnahme:**
- ☒ gepumpte Probe
- ☐ aus laufender Sanierung
- ☐ geschöpfte Probe
- ☐ sonstige:

**12. Entnahmegerät:**
- ☐ Saugpumpe
- ☒ Unterwasserpumpe
- ☐ Schöpfkelle
- ☐ sonstige:

**13. Material Steigrohr:**
- ☐ PVC-U
- ☐ PE-HD
- ☐ Stahl verzinkt

**14. Material Schlauch:**
- ☒ PVC
- ☐ Stoff
- ☐ Teflon
- ☐ Gummi

| 15. Entnahmetiefe (m) | 16. RWSp (m) | 17. $T_{Luft}$(°C)/ Witterung |
|---|---|---|
| 20,00 | 7,74 | + 2° neblig |

| 18. Messungen (Pumpdauer oder Probenahmepunkte) | nach 5 min | nach 10 min | nach 20 min | nach 30 min | |
|---|---|---|---|---|---|
| Zeitpunkt der Messung | 10:00 | 10:05 | 10:15 | 10:25 | |
| Stand d. Wasseruhr (cbm) | / | / | / | / | |
| Förderstrom [ ] l/s [☒] l/min | 10 | 10 | 10 | 10 | |
| Wasserspiegel u. Ansatzpunkt (m) | 8,05 | 9,42 | 9,69 | 10,01 | |
| Probenahme | ☐ | ☐ | ☐ | ☒ | ☐ |
| Wassertemperatur [°C] | 10,4 | 10,3 | 10,2 | 10,2 | |
| elektrische Leitfähigkeit (25° C) | 303 | 312 | 341 | 336 | |
| pH-Wert | 6,81 | 6,84 | 6,82 | 6,83 | |
| Sauerstoffgehalt [mg/l] | 4,06 | 4,16 | 4,12 | 4,10 | |
| Redox-Spannung [mV] | 42 | 46 | 43 | 41 | |
| Färbung | farblos | farblos | farblos | farblos | |
| Trübung | klar | klar | klar | klar | |
| Geruch | ohne | ohne | ohne | ohne | |

**19. Probengefäße / Stabilisierung**

| ☐ Braunglas | | ☐ Grünglas | | ☒ PE-Flasche | | ☐ HS | ☐ | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|
| ml | ml | ml | ml | 200 ml | ml | ml | ml | ml | Flaschen-satz (divers) |
| | | | | | | | | | |

**20. Wasserstand Wiederanstiegsphase m u. MP (Minuten nach Pumpstopp)**

| ( min) | ( min) | ( min) | ( min) | ( min) | ( min) |
|---|---|---|---|---|---|
| | | | | | |

| 21. Sonstige Bemerkungen | 22. Unterschrift |
|---|---|
| | [redacted] |

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Vor Nachsampling **Projektnummer:** 288676

Ort: Nattheim TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM 1 OFF **Probenbezeichnung:** VP GWM 1 OFF - 1

Messpunkt: ☐ GOK: ☒ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe: 25 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 11 | 07 | 2024 | 13 | 06 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: Sq1 ..... ..... .....

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch ~~PVC~~: ☒ Sonstiges: LDPE

Wasserspiegel: vor Entnahme: 9,80 m u. MP bei Entnahme: ..... m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: .....$s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: ☐☐ min: 30

Stand Wasseruhr: Pumpbeginn: 1,498 $m^3$ Probenahme: ..... $m^3$ Förderstrom: .....l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☐ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 15 | 20 | 25 |
|---|---|---|---|---|---|---|
| Farbe farblos | GW-Stand [m u. MP] | 14,55 | 17,8 | 17,68 | 17,65 | 17,65 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 1,563 | 1,655 | 1,720 | 1,777 | 1,844 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,3 | 0,3 | 0,2 | 0,2 | 0,2 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 14,1 | 13,9 | 14,0 | 14,1 | 14,3 |
| Bodensatz: ☐ ja ☐ nein | pH-Wert [bei o.g. Wassertemp] | 6,6 | 6,6 | 6,6 | 6,6 | 6,6 |
| filtriert: ☐ ja ☐ nein | Sauerstoff [mg/l] | 8,9 | 8,5 | 8,5 | 8,6 | 8,7 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 907 | 1041 | 990 | 995 | 990 |
| | Redox-Spannung [mV] | 259 | 268 | 274 | 281 | 287 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☒ PE: 2x50 ml Art: Salzsäure

☐ Headspace: .....ml

Witterung: ☒ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 13 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 11.7.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

### Untersuchungen bei Probenahme – Fortsetzung

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zeit nach Pumpbeginn [min] | 30 | | | | | | | | | | |
| GW-Stand [m u. MP] | 17,65 | | | | | | | | | | |
| Zählerstand | 1.898 | | | | | | | | | | |
| Förderrate [l/s] | 0,2 | | | | | | | | | | |
| Temperatur [°C] | 14,0 | | | | | | | | | | |
| pH-Wert [bei o.g. Wassertemp] | 6,6 | | | | | | | | | | |
| Sauerstoff [mg/l] | 8,7 | | | | | | | | | | |
| Leitfähigkeit [25°] [µS/cm] | 920 | | | | | | | | | | |
| Redox-Spannung [mV] | 288 | | | | | | | | | | |

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Nonroutine Sampling **Projektnummer:** 288676

Ort: ..... TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM 3 OFF **Probenbezeichnung:** .....

Messpunkt: ☐ GOK: ☑ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☑ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe 24,25 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 11 | 04 | 2025 | 12 | 00 |

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: IQ1 ..... ..... .....

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☒ Sonstiges: .....

Wasserspiegel: vor Entnahme: 7,53 m u. MP bei Entnahme: ..... m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: ..... $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: ☐☐ min: 30

Stand Wasseruhr: Pumpbeginn: 1,082 $m^3$ Probenahme: ..... $m^3$ Förderstrom: 0,2 l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☐ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 15 | 25 | 30 |
|---|---|---|---|---|---|---|
| Farbe: farblos | GW-Stand [m u. MP] | 9,45 | 10,07 | 10,44 | 10,44 | 11,85 |
| Trübung: ☑ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 1,148 | 1,216 | 1,286 | 1,360 | 1,470 |
| Geruch: ☑ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,25 | 0,2 | 0,2 | 0,2↑ | 0,3 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,9 | 13,0 | 12,6 | 12,6 | 12,5 |
| Bodensatz: ☐ ja ☑ nein | pH-Wert [bei o.g. Wassertemp] | 7,1 | 7,1 | 7,1 | 7,2 | 7,2 |
| filtriert: ☐ ja ☑ nein | Sauerstoff [mg/l] | 6,8 | 6,7 | 6,4 | 6,6 | 6,8 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 874 | 865 | 852 | 791 | 780 |
| | Redox-Spannung [mV] | 126 | 183 | 200 | 215 | 229 |

Konservierung: ☐ ja ☑ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☑ PE: 2x50 ml Art: Saurefrei

☐ Headspace: .....ml

Witterung: ☑ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 11 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 11.4.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Nonroutinesampling **Projektnummer:** 288676

Ort: Katterbach TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM2OFF **Probenbezeichnung:** WPGWM2OFF_1

Messpunkt: ☐ GOK: ☒ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe 24,85 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 11 | 04 | 2025 | 14 | 15 |

Art der Probenahme: ☐ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 ..... ..... .....

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch ~~PVC~~ LDPE: ☒ Sonstiges: .....

Wasserspiegel: vor Entnahme: 6,33 m u. MP bei Entnahme: ..... m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: .....$s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: 0 min: 30

Stand Wasseruhr: Pumpbeginn: 1,930 $m^3$ Probenahme: ..... $m^3$ Förderstrom: .....l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☒ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 15 | 20 | 25 |
|---|---|---|---|---|---|---|
| Farbe farblos | GW-Stand [m u. MP] | 7,53 | 7,59 | 7,60 | 8,47 | 8,86 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 0,251 | ~~0,72~~ 2,046 | 2,108 | 2,255 | 2,330 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 2,003 | 0,21 | 0,4 | 0,4 | 0,4 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,2 | 12,4 | 12,0 | 11,9 | 11,8 |
| Bodensatz: ☐ ja ☐ nein | pH-Wert [bei o.g. Wassertemp] | 7,1 | 7,0 | 7,1 | 7,1 | 7,0 |
| filtriert: ☐ ja ☐ nein | Sauerstoff [mg/l] | 6,10 | 8,1 | 7,3 | 7,0 | 7,2 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | ~~250~~ 600 | 599 | 631 | 635 | ~~626~~ 640 |
| | Redox-Spannung [mV] | ~~6,60~~ 250 | 257 | 260 | 268 | 272 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

2 ☒ PE: 250 ml Art: Salzsäure

☐ Headspace: .....ml

Witterung: ☒ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 12 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 11.4.25 [redacted]

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

### Untersuchungen bei Probenahme – Fortsetzung

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zeit nach Pumpbeginn [min] | 30 | | | | | | | | | | |
| GW-Stand [m u. MP] | 8,98 | | | | | | | | | | |
| Zählerstand | 2,419 | | | | | | | | | | |
| Förderrate [l/s] | 0,4 | | | | | | | | | | |
| Temperatur [°C] | 11,8 | | | | | | | | | | |
| pH-Wert [bei o.g. Wassertemp] | 7,1 | | | | | | | | | | |
| Sauerstoff [mg/l] | 7,1 | | | | | | | | | | |
| Leitfähigkeit [25°] [µS/cm] | 642 | | | | | | | | | | |
| Redox-Spannung [mV] | 275 | | | | | | | | | | |

# PROBENAHMEPROTOKOLL
Grundwasser

[redacted]

**Projekt:** VGH Routine Sampling **Projektnummer:** 788676

Ort: Gutleuth TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 1 - OFF **Probenbezeichnung:** WP GWM 1 - OFF - 2

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☑ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☑ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 25 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.05.08 | 10:45 |

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☑ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 13,83 bei Entnahme: m u. MP

Lichtlot-Nr.: ✓ Frequenz MP1: – $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: :60

Stand Wasseruhr: Pumpbeginn [$m^3$]: 2,083 Probenahme [$m^3$]:

Förderstrom [l/sec]: 0,11

Leichtstoffphase vorhanden: ☐ ja ☑ nein Schichtstärke: separat beprobt: ☐ ja ☑ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☑ ohne ☐ schwach ☐ stark

Farbe: farblos

Trübung: ☑ keine ☐ schwach ☐ stark

Geruch: ☑ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☑ nein

filtriert: ☐ ja ☑ nein

| Zeit nach Start [min] | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 16,62 | 16,34 | 16,42 | 16,45 | 16,47 | 16,45 | 16,51 | 16,51 |
| Zählerstand | 2,125 | 2,156 | 2,186 | 2,217 | 2,248 | 2,278 | 2,308 | 2,339 |
| Förderrate [l/s] | 0,2 | 0,11 | 0,11 | 0,11 | 0,11 | 0,11 | 0,11 | 0,11 |
| Temperatur [°C] | 12,9 | 13,2 | 13,2 | 13,4 | 13,4 | 13,4 | 13,4 | 13,4 |
| pH-Wert [bei Wassertemp.] | 6,63 | 6,62 | 6,62 | 6,62 | 6,61 | 6,61 | 6,62 | 6,62 |
| Sauerstoff [mg/l] | 8,65 | 8,62 | 8,6 | 8,59 | 8,58 | 8,6 | 8,6 | 8,61 |
| LF bei 25°C [µS/cm] | 883 | 868 | 894 | 888 | 886 | 886 | 885 | 885 |
| Redox-Spannung [mV] | 288,6 | 300,6 | 301,6 | 303,2 | 301,9 | 302,4 | 307 | 310,4 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☑ nein

☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☑ PE: 2x Saarstedt 50 ml Art:

☐ Headspace: ml ☐ Sonstiges:

Witterung: ☑ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]: 15

Probenübergabe: ☑ vor Ort ☑ [redacted] Datum: 08.05.25

Probenehmer: [redacted] Unterschrift: [redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

[redacted]

**Projekt:** Non routine sampling **Projektnummer:** 288676

Ort: Kötzbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 2 - OFF **Probenbezeichnung:** WP GWM 2 - OFF - 2

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,85 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 08.05.2025 | ~~8:50~~ 9:20 |

Art der Probenahme: ☐ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.:

☐ Steigrohre Satznr.: ☐ Entnahmeleitung Schlauch LDPE

Wasserspiegel: vor Entnahme: 6,43 bei Entnahme: m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: s$^{-1}$

Entnahmetiefe: m u. MP Pumpdauer vor Probenahme: :40

Stand Wasseruhr: Pumpbeginn [m$^3$]: 0,879 Probenahme [m$^3$]:

Förderstrom [l/sec]: 0,4

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe:

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☐ nein

filtriert: ☐ ja ☐ nein

| Zeit nach Start [min]: | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 8,55 | 9,02 | 9,14 | 9,24 | 9,27 | 9,29 | 9,31 | 9,32 |
| Zählerstand | 0,957 | 1,146 | 1,244 | 1,369 | 1,487 | 1,608 | 1,73 | 1,854 |
| Förderrate [l/s] | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| Temperatur [°C] | 10,7 | 10,7 | 10,8 | 10,9 | 10,9 | 10,9 | 10,9 | 11 |
| pH-Wert [bei Wassertemp.] | 7,04 | 7,05 | 7,07 | 7,06 | 7,06 | 7,06 | 7,06 | 7,06 |
| Sauerstoff [mg/l] | 7,38 | 7,54 | 7,03 | 6,96 | 6,92 | 6,89 | 6,89 | 6,85 |
| LF bei 25°C [µS/cm] | 662 | 632 | 652 | 661 | 663 | 664 | 664 | 665 |
| Redox-Spannung [mV] | 276,8 | 289,6 | 293,9 | 301,2 | 304,3 | 308,7 | 311,7 | 314,9 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| 2x ☒ | PE: | 250 ml | Art: | SARSTEDT |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]:

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 8.5.2025

Probenehmer: [redacted] Unterschrift:

# PROBENAHMEPROTOKOLL
Grundwasser

[redacted]

**Projekt:** Uni routine sampling **Projektnummer:** 288676

Ort: Kattenbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GW 4 3 - OFF **Probenbezeichnung:** GP GWM 3-OFF_2

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,75 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.05.08 | 12:50 |

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ 1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☑ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 7,38 bei Entnahme: m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: — $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: : 40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 2,364 Probenahme [$m^3$]:

Förderstrom [l/sec]: 0,3

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: fuchs

Trübung: ☐ keine ☒ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min]: | t | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 10,10 | 11,10 | 11,61 | 11,95 | 12,18 | 12,34 | 12,44 | |
| Zählerstand | 2,459 | 2,540 | 2,625 | 2,708 | 2,793 | 2,886 | 2,958 | |
| Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | |
| Temperatur [°C] | 11,8 | 11,7 | 11,8 | 11,8 | 11,9 | 11,8 | 11,8 | |
| pH-Wert [bei Wassertemp.] | 7,05 | 7,03 | 7,14 | 7,18 | 7,18 | 7,15 | 7,15 | |
| Sauerstoff [mg/l] | 7,05 | 6,8 | 7,1 | 7,27 | 7,4 | 7,74 | 7,66 | |
| LF bei 25°C [µS/cm] | 887 | 924 | 827 | 803 | 802 | 795 | 793 | |
| Redox-Spannung [mV] | 306,7 | 298,3 | 285,4 | 291,5 | 294,6 | 297,4 | 297,7 | |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☑ nein

☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☑ PE: 2 x 10 ml Art: Salzsäure

☐ Headspace: ml ☐ Sonstiges:

Witterung: ☐ sonnig ☒ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]: 15

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 8. 5. 25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Dan Routine Sampling **Projektnummer:** 288676

Ort: Walldorf TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM2_OFF **Probenbezeichnung:** DUP GWM2_OFF_3

Messpunkt: ☐ GOK: ☑ POK: **Messpunkthöhe** [m NN]

**Art der Meßstelle:** ☑ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer: [cm/Zoll]

Filterart: ☑ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filterlage von bis m u. MP Auslotung Brunnentiefe 29,85 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 02 | 06 | 2025 | 10 | 30 |

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ 1

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: LDPE

Wasserspiegel: vor Entnahme: 6,57 m u. MP bei Entnahme: 9,42 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h [ ] min [40]

Stand Wasseruhr: Pumpbeginn: 3,016 $m^3$ Probenahme: 3,975 $m^3$ Förderstrom: 0,4 l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: mm Leichtstoffphase separat beprobt: ☐ ja ☐ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|---|
| Farbe: farblos | GW-Stand [m u. MP] | 8,63 | 9,12 | 9,37 | 9,41 | 9,42 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 3,135 | 3,256 | 3,458 | 3,~~832~~ | ~~3,875~~ 3,945 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 10,9 | 11,0 | 11,1 | 11,1 | 11,1 |
| Bodensatz: ☐ ja ☒ nein | pH-Wert [bei o.g. Wassertemp] | 7,07 | 7,06 | 7,06 | 7,06 | 7,06 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 7,04 | 6,57 | 6,51 | 6,85 | 6,81 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 613 | 630 | 648 | 655 | 662 |
| | Redox-Spannung [mV] | 274 | 282 | 291 | 297 | 301 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☒ PE: 2x50 ml Art: Salzsäure

☐ Headspace: ml

Witterung: ☐ sonnig ☒ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 20 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 2.6.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Dem Routine Sampling **Projektnummer:** 288676

Ort: Hattorf TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GW1 - OFF **Probenbezeichnung:** UP GWS 1 - OFF_3

Messpunkt: ☐ GOK: ☑ POK: **Messpunkthöhe** [m NN]

**Art der Meßstelle:** ☑ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer: [cm/Zoll]

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filterlage von bis m u. MP Auslotung Brunnentiefe 27 m u. MP

**Probenahmezeitpunkt:** Tag 02 Monat 06 Jahr 2017 h 12 min 05

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: LDPE

Wasserspiegel: vor Entnahme: 17,17 m u. MP bei Entnahme: 17,67 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: s⁻¹

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h [ ] min 40

Stand Wasseruhr: Pumpbeginn: 4,002 m³ Probenahme: 4,453 m³ Förderstrom: 0,2 l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: mm Leichtstoffphase separat beprobt: ☐ ja ☒ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|---|
| Farbe s.Saad Sm | GW-Stand [m u. MP] | 17,07 | 17,40 | 17,52 | 17,60 | 17,67 |
| Trübung: ☐ ohne ☑ schwach ☐ mittel ☐ stark | Zählerstand | 4,012 | 4,131 | 4,252 | 4,370 | 4,453 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,5 | 12,8 | 12,7 | 12,7 | 12,7 |
| Bodensatz: ☒ ja ☐ nein | pH-Wert [bei o.g. Wassertemp] | 6,70 | 6,66 | 6,64 | 6,62 | 6,62 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 8,88 | 8,74 | 8,51 | 8,43 | 8,40 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 914 | 897 | 892 | 884 | 878 |
| | Redox-Spannung [mV] | 275 | 287 | 297 | 309 | 317 |

Konservierung: ☐ ja ☑ nein

Probengefäß: ☐ Glasschliff: ml Art:

☐ SDGF ml Art:

☑ PE: 4x10 ml Art: Saatgut

☐ Headspace: ml

Witterung: ☐ sonnig ☒ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 10 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 27.6.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Non Routine Sampling **Projektnummer:** 288676

Ort: Galtosa TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWMS_OFF **Probenbezeichnung:** GP GWMS_OFF_03

Messpunkt: ☐ GOK: ☑ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe: 24,25 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 02 | 06 | 2022 | 14 | 25 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: COPE

Wasserspiegel: vor Entnahme: 7,58 m u. MP bei Entnahme: 12,20 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: ..... $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h ☐☐ min 40

Stand Wasseruhr: Pumpbeginn: 4,507 $m^3$ Probenahme: 5,235 $m^3$ Förderstrom: 0,5 l/sec

Leichtstoffphase vorhanden: ☐ ja ☐ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☑ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|---|
| Farbe: Farblos | GW-Stand [m u. MP] | 10,21 | 11,26 | 11,82 | 12,05 | 12,30 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 4,601 | 4,690 | 4,872 | 5,051 | 5,235 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,01 | 12,00 | 11,91 | 11,90 | 11,85 |
| Bodensatz: ☐ ja ☒ nein | pH-Wert [bei o.g. Wassertemp] | 7,11 | 7,14 | 7,17 | 7,19 | 7,21 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 7,14 | 7,24 | 7,35 | 7,44 | 7,51 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 817 | 800 | 738 | 757 | 755 |
| | Redox-Spannung [mV] | 314 | 308 | 256 | 250 | 235 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☒ PE: 2x10 ml Art: Salzsäure

☐ Headspace: .....ml

Witterung: ☐ sonnig ☒ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur: 20 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 02.06.2022

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Max Nachtrag Sampling **Projektnummer:** 288676

Ort: Hatlerdorf TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 1 - OFF **Probenbezeichnung:** QP GWM 1 - OFF - 4

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 25 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.07.01 | 10 : 30 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ 1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☒ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 17,23 bei Entnahme: 17,63 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: : 50

Stand Wasseruhr: Pumpbeginn [$m^3$]: 3,544 Probenahme [$m^3$]: 4,052

Förderstrom [l/sec]: 0,2

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☐ ohne ☒ schwach ☐ stark

Farbe: hell

Trübung: ☐ keine ☒ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☒ ja ☐ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min]: | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 17,04 | 17,38 | 17,46 | 17,52 | 17,55 | 17,61 | 17,62 | 17,63 |
| Zählerstand | 3,600 | 3,662 | 3,721 | 3,783 | 3,845 | 3,902 | 3,965 | 4,028 |
| Förderrate [l/s] | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 |
| Temperatur [°C] | 13,2 | 13,5 | 13,6 | 13,6 | 13,6 | 13,6 | 13,6 | 13,6 |
| pH-Wert [bei Wassertemp.] | 6,67 | 6,65 | 6,64 | 6,64 | 6,64 | 6,63 | 6,63 | 6,63 |
| Sauerstoff [mg/l] | 8,71 | 8,70 | 8,68 | 8,65 | 8,65 | 8,63 | 8,58 | 8,57 |
| LF bei 25°C [µS/cm] | 902 | 897 | 885 | 882 | 880 | 880 | 880 | 880 |
| Redox-Spannung [mV] | 284 | 256 | 295 | 305 | 305 | 307 | 310 | 312 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☒ | PE: | 2 x 1 l | Art: | Salzsäure |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☒ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]: 25

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 01.07.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Dem Reactive Sampling **Projektnummer:** 281676

Ort: Halle Saale TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 3_OFF **Probenbezeichnung:** WP GWM 3_OFF_4

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,25 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.07.01 | 12:15 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ 1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☒ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 7,65 bei Entnahme: 12,56 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: / $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: 00:40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 4,122 Probenahme [$m^3$]: 4,855

Förderstrom [l/sec]: 0,3

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: Farblos

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min]: | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 10,74 | 11,17 | 11,74 | 12,03 | 12,28 | 12,42 | 12,51 | 12,56 |
| Zählerstand | 4,225 | 4,314 | 4,405 | 4,457 | 4,585 | 4,676 | 4,767 | 4,855 |
| Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 |
| Temperatur [°C] | 11,1 | 12,0 | 12,0 | 12,0 | 12,0 | 11,9 | 11,9 | 11,9 |
| pH-Wert [bei Wassertemp.] | 7,05 | 7,12 | 7,14 | 7,15 | 7,16 | 7,17 | 7,17 | 7,17 |
| Sauerstoff [mg/l] | 7,16 | 7,08 | 7,04 | 7,03 | 7,00 | 6,98 | 6,96 | 6,95 |
| LF bei 25°C [µS/cm] | 846 | 822 | 804 | 756 | 731 | 750 | 785 | 788 |
| Redox-Spannung [mV] | 252 | 285 | 290 | 294 | 295 | 296 | 298 | 299 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☒ PE: 2 x 50 ml Art: Salzsäure

☐ Headspace: ml ☐ Sonstiges:

Witterung: ☒ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]: 31

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 2.7.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Non Reactive Sampling **Projektnummer:** 288 676

Ort: Gatterstadt TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 2 - OFF **Probenbezeichnung:** UP GWM2 - OFF - 4

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☐ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,85 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2021.07.01 | 14:10 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☒ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 6,68 bei Entnahme: 9,38 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: 60 : 40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 0,4 Probenahme [$m^3$]: 5,251

Förderstrom [l/sec]: 4 0,4 5 1

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☐ ohne ☒ schwach ☐ stark

Farbe: bn

Trübung: ☐ keine ☒ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☒ ja ☐ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min]: | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 9,02 | 9,10 | 9,27 | 9,31 | 9,59 | 9,37 | 9,38 | 9,38 |
| Zählerstand | 4,610 | 4,732 | 4,851 | 4,972 | 5,050 | 5,111 | 5,230 | 5,351 |
| Förderrate [l/s] | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 | 0,4 |
| Temperatur [°C] | 11,5 | 11,2 | 11,1 | 11,1 | 11,1 | 11,1 | 11,1 | 11,1 |
| pH-Wert [bei Wassertemp.] | 7,08 | 7,07 | 7,07 | 7,06 | 7,07 | 7,07 | 7,07 | 7,07 |
| Sauerstoff [mg/l] | 7,54 | 7,14 | 7,14 | 7,08 | 7,02 | 6,98 | 6,96 | 6,95 |
| LF bei 25°C [µS/cm] | 618 | 628 | 636 | 640 | 643 | 645 | 647 | 650 |
| Redox-Spannung [mV] | 286 | 284 | 285 | 304 | 307 | 309 | 311 | 313 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☒ PE: 2x50 ml Art: Salzsäure

☐ Headspace: ml ☐ Sonstiges:

Witterung: ☒ sonnig ☐ bewölkt ☐ Regen ☐ Schneefall Lufttemperatur [°C]: 31

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 2.7.21

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Von Routine Sample **Projektnummer:** 288675

Ort: Kattenbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWMZ-OFF **Probenbezeichnung:** GWMZ-OFF_5

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☑ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,950 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.07.30 | 9:30 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☒ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 6,78 bei Entnahme: 9,99 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 20 m u. MP Pumpdauer vor Probenahme: :30

Stand Wasseruhr: Pumpbeginn [$m^3$]: 3,435 Probenahme [$m^3$]: 4,245

Förderstrom [l/sec]: 0,4 l/s

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☐ ohne ☐ schwach ☐ stark

Farbe: farblos

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min] | 5 | 10 | 15 | 20 | 25 | 30 |
|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 9,26 | 9,7 | 9,96 | 9,96 | 9,98 | 9,99 |
| Zählerstand | 3,600 | 3,724 | 3,844 | 3,963 | 4,084 | 4,245 |
| Förderrate [l/s] | 0,45 | 0,45 | 0,45 | 0,450 | 0,45 | 0,45 |
| Temperatur [°C] | 10,8 | 10,8 | 10,8 | 10,9 | 10,9 | 10,9 |
| pH-Wert [bei Wassertemp.] | 7,11 | 7,09 | 7,07 | 7,05 | 7,03 | 7,02 |
| Sauerstoff [mg/l] | 7,15 | 7,98 | 6,18 | 6,73 | 6,68 | 6,61 |
| LF bei 25°C [µS/cm] | 639 | 660 | 664 | 663 | 663 | 665 |
| Redox-Spannung [mV] | 143,1 | 148,2 | 150,9 | 155,3 | 156,6 | 154,2 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☒ | PE: | 2 x 50 | ml | Art: Salzsäure |
| ☐ | Headspace: | | ml | ☐ Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur [°C]: 16

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 30.7.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Von Routine Sampling **Projektnummer:** 288676

Ort: Kath Sachs TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM 1 - OFF **Probenbezeichnung:** GWM 1 - OFF - 5

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☑ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☐ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 25,0 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 2025.07.30 | 11:50 |

Art der Probenahme: ☑ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☑ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☑ Entnahmeleitung COPE

Wasserspiegel: vor Entnahme: 14,57 bei Entnahme: 17,34 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: m u. MP Pumpdauer vor Probenahme: : 30

Stand Wasseruhr: Pumpbeginn [$m^3$]: 4,272 Probenahme [$m^3$]: 4,487

Förderstrom [l/sec]: 0,15

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☑ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: Farblos

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☑ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☑ nein

| Zeit nach Start [min] | 5 | 10 | 15 | 20 | 25 | 30 |
|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 16,58 | 17,07 | 17,13 | 17,23 | 17,27 | 17,22 |
| Zählerstand | 4,305 | 4,341 | 4,385 | 4,415 | 4,452 | 4,482 |
| Förderrate [l/s] | 0,11 | 0,15 | 0,15 | 0,15 | 0,15 | 0,15 |
| Temperatur [°C] | 12,3 | 12,3 | 12,4 | 12,4 | 12,4 | 12,4 |
| pH-Wert [bei Wassertemp.] | 6,82 | 6,84 | 6,86 | 6,90 | 6,91 | 6,92 |
| Sauerstoff [mg/l] | 8,76 | 8,74 | 8,20 | 8,75 | 8,75 | 8,75 |
| LF bei 25°C [µS/cm] | 1013 | 1013 | 1024 | 1024 | 1023 | 1022 |
| Redox-Spannung [mV] abgelesen | 166 | 161 | 163 | 165 | 164 | 164 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☑ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☑ | PE: | 2x 50 ml | Art: | Ansäuert |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☑ Regen ☐ Schneefall Lufttemperatur [°C]: 16

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 31.7.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL

Grundwasser

**Projekt:** Non Routine Sampling **Projektnummer:** 288676

Ort: Hattersheim TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM3_OF **Probenbezeichnung:** GWM3_OF_5

Messpunkt: ☐ GOK ☐ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 24,3 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 30.07.2025 | 12:45 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.: 1

☐ Steigrohre Satznr.: ☒ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 7,66 bei Entnahme: 11,92 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 20 m u. MP Pumpdauer vor Probenahme: :

Stand Wasseruhr: Pumpbeginn [$m^3$]: 44,34 Probenahme [$m^3$]:

Förderstrom [l/sec]: 0,3

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☐ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe:

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min] | 5 | 10 | 15 | 20 | 25 | 30 |
|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 5,88 | 10,85 | 11,30 | 11,59 | 11,71 | 11,92 |
| Zählerstand | 4,518 | 4,642 | 4,757 | 4,794 | 4,867 | 4,943 |
| Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 |
| Temperatur [°C] | 11,8 | 11,9 | 11,9 | 11,9 | 11,9 | 11,5 |
| pH-Wert [bei Wassertemp.] | 6,34 | 7,91 | 7,89 | 7,34 | 7,33 | 7,36 |
| Sauerstoff [mg/l] | 6,58 | 6,34 | 6,26 | 6,38 | 6,54 | 7,08 |
| LF bei 25°C [µS/cm] | 847 | 857 | 809 | 772 | 766 | 768 |
| Redox-Spannung [mV] abgelesen | 153,5 | 148,5 | 149,3 | 148 | 148,4 | 152,0 |

Bemerkungen:

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☐ | PE: | 2 x 10 ml | Art: | Salzsäure |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur [°C]: 16

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 31.7.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Non routine sampling **Projektnummer:** 288676

Ort: Katterbach TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM3_OFF **Probenbezeichnung:** GWM3_OFF_BG

Messpunkt: ☐ GOK: ☒ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe 24,25 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 28 | 08 | 2025 | 14 | 00 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: LOPE

Wasserspiegel: vor Entnahme: 8,46 m u. MP bei Entnahme: 11,10 m u. MP

Lichtlot-Nr.: ..... Frequenz MP1: .....$s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: [ ] min: [40]

Stand Wasseruhr: Pumpbeginn: 7,641 $m^3$ Probenahme: 8,134 $m^3$ Förderstrom: 0,3 l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☒ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 |
|---|---|---|---|---|---|
| Farbe: farblos | GW-Stand [m u. MP] | 7,848 | 7,915 | 8,025 | 8,134 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 11,15 | 10,95 | 8,025 | 11,0 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,3 | 0,2 | 0,2 | 0,2 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 14,0 | 14,2 | 14,3 | 14,3 |
| Bodensatz: ☐ ja ☒ nein | pH-Wert [bei o.g. Wassertemp] | 7,1 | 7,1 | 7,2 | 7,2 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 7,8 | 7,4 | 7,2 | 7,1 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 859 | 803 | 763 | 756 |
| | Redox-Spannung [mV] | 223 | 221 | 219 | 217 |

Konservierung: ☐ ja ☐ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☒ PE: 2x50 ml Art: .....

☐ Headspace: .....ml

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur: 20 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 28.8.25

Probenehmer: [redacted] Unterschrift: [redacted]



Anmerkung: Probleme mit dem Stromaggregat → nur 30 min pumpen möglich

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

Non

**Projekt:** Routine Sampling **Projektnummer:** 288676

Ort: Katterbach TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM2-OFF **Probenbezeichnung:** GWM2-OFF_06

Messpunkt: ☐ GOK: ☒ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe 24,85 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 28 | 08 | 2025 | 10 | 30 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: sal ..... ..... ..... .....

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: LDPE

Wasserspiegel: vor Entnahme: 6,91 m u. MP bei Entnahme: 8,92 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: ..... $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: ☐☐ min: 40

Stand Wasseruhr: Pumpbeginn: 2726,226 $m^3$ Probenahme: 2727,111 $m^3$ Förderstrom: 0,3 l/sec

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☒ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|---|
| Farbe: farblos | GW-Stand [m u. MP] | 8,74 | 8,89 | 8,89 | 8,91 | 8,92 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 2726,480 | 6,585 | 6,756 | 6,924 | 7,111 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,5 | 12,4 | 12,2 | 12,2 | 12,3 |
| Bodensatz: ☐ ja ☒ nein | pH-Wert [bei o.g. Wassertemp] | 7,1 | 7,1 | 7,1 | 7,1 | 7,1 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 7,5 | 7,1 | 6,8 | 6,7 | 6,6 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 646 | 649 | 651 | 652 | 653 |
| | Redox-Spannung [mV] | 292 | 286 | 282 | 279 | 273 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☒ PE: 2x50 ml Art: .....

☐ Headspace: .....ml

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur: 20 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 28.8.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENNAHMEPROTOKOLL

## Grundwasser

**Projekt:** Non routine sampling **Projektnummer:** 288676

Ort: Kalterbach TK 25: ..... Rechtswert: ..... Hochwert: .....

**Messstellenbezeichnung:** GWM1_OFF **Probenbezeichnung:** WP GWM1-OFF_#6

Messpunkt: ☐ GOK: ☒ POK: **Messpunkthöhe** ..... [m NN]

**Art der Meßstelle:** ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige: .....

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer: ..... [cm/Zoll]

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer: .....

Filterlage von ..... bis ..... m u. MP Auslotung Brunnentiefe: 25 m u. MP

| | Tag | Monat | Jahr | h | min |
|---|---|---|---|---|---|
| **Probenahmezeitpunkt:** | 28 | 08 | 2025 | 12 | 20 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige: .....

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 ..... ..... .....

Material Entnahmeleitung: Steigrohr PVC: ☐ Schlauch PVC: ☐ Sonstiges: LDPE

Wasserspiegel: vor Entnahme: 14,42 m u. MP bei Entnahme: 17,34 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: ..... $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: h: ☐☐ min: ☒40

Stand Wasseruhr: Pumpbeginn: 2727,11 $m^3$ Probenahme: 2727,641 $m^3$ Förderstrom: 0,2 l/sec

Leichtstoffphase vorhanden: ☒ ja ☐ nein Schichtstärke: ..... mm Leichtstoffphase separat beprobt: ☐ ja ☒ nein

| **Untersuchungen bei der Probenahme:** | Zeit nach Pumpbeginn [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|---|
| Farbe: farblos | GW-Stand [m u. MP] | 18,06 | 17,85 | 17,70 | 17,64 | 17,34 |
| Trübung: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Zählerstand | 7,218 | 7,368 | 7,46 | 7,560 | 7,641 |
| Geruch: ☒ ohne ☐ schwach ☐ mittel ☐ stark | Förderrate [l/s] | 0,2 | 0,154 | 0,14 | 0,14 | 0,14 |
| nach: ☐ nicht geprüft | Temperatur [°C] | 12,8 | 13,8 | 14,1 | 14,8 | 14,4 |
| Bodensatz: ☐ ja ☒ nein | pH-Wert [bei o.g. Wassertemp] | 6,7 | 6,7 | 6,7 | 6,7 | 6,7 |
| filtriert: ☐ ja ☒ nein | Sauerstoff [mg/l] | 8,7 | 8,6 | 8,6 | 8,5 | 8,5 |
| Bemerkungen: | Leitfähigkeit [25°] [µS/cm] | 1129 | 1127 | 1122 | 1115 | 1109 |
| | Redox-Spannung [mV] | 242 | 239 | 234 | 225 | 226 |

Konservierung: ☐ ja ☒ nein

Probengefäß: ☐ Glasschliff: .....ml Art: .....

☐ SDGF .....ml Art: .....

☒ PE: 2x50 ml Art: .....

☐ Headspace: .....ml

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur: 20 °C

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 28.8.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Non routine sampling **Projektnummer:** 288676

Ort: Kattenbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM1-OFF **Probenbezeichnung:** GWM1_OFF_7

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe 25 m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 25.9.25 | 13:10 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.:

☐ Steigrohre Satznr.: ☐ Entnahmeleitung

Wasserspiegel: vor Entnahme: 14,72 bei Entnahme: ~~12,38~~ m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: 40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 1281,698 Probenahme [$m^3$]: 1282,138

Förderstrom [l/sec]: ~~0,17~~ 0,11

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: –

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|
| GW-Stand [m u. MP] | ~~16,44~~ 12,8 | ~~16,52~~ 12,90 | 16,55 | 16,61 | 16,66 |
| Zählerstand | 1,842 | 1,896 | 1,975 | 2,056 | 2,138 |
| Förderrate [l/s] | 0,11 | 0,11 | 0,11 | 0,11 | 0,11 |
| Temperatur [°C] | 12,8 | 12,9 | 12,8 | 12,7 | 12,6 |
| pH-Wert [bei Wassertemp.] | 6,52 | 6,52 | 6,54 | 6,53 | 6,57 |
| Sauerstoff [mg/l] | 8,84 | 8,78 | 8,62 | 8,50 | 8,42 |
| LF bei 25°C [µS/cm] | – | – | – | – | |
| Redox-Spannung [mV] | ~~317,3~~ | ~~316,4~~ | 315,9 | 314,8 | 315,6 |

Bemerkungen:
LF nicht möglich → Fehler bei Messsonde

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☐ | PE: 2x50 | ml | Art: | |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur [°C]: 13

Probenübergabe: ☐ vor Ort ☐ [redacted] Datum: 25.9.25

Probenehmer: [redacted] Unterschrift: [redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

[redacted]

**Projekt:** Non routine sampling **Projektnummer:** 288676

Ort: Katterbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM2_OFF **Probenbezeichnung:** GWM2_OFF_7

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 25.9.25 | 15:00 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQA Messgerätesatznr.:

☐ Steigrohre Satznr.: ☐ Entnahmeleitung

Wasserspiegel: vor Entnahme: 7,61 bei Entnahme: 8,86 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: : 40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 1282,199 Probenahme [$m^3$]: 1282,868

Förderstrom [l/sec]: 0,3

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: —

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☒ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min] | 5 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 8,54 | 8,86 | 8,86 | 8,86 | 8,86 |
| Zählerstand | 2,297 | 2,398 | 2,571 | 2,700 | 2,868 |
| Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 |
| Temperatur [°C] | 12,1 | 12,4 | 12,3 | 11,7 | 11,6 |
| pH-Wert [bei Wassertemp.] | 6,97 | 6,96 | 6,96 | 6,95 | 6,95 |
| Sauerstoff [mg/l] | 7,68 | 7,4 | 7,41 | 7,25 | 7,12 |
| LF bei 25°C [µS/cm] | — | — | — | — | — |
| Redox-Spannung [mV] | 331,9 | 340,9 | 349,3 | 353,5 | 349,3 |

Bemerkungen:

LF nicht möglich -> Fehler bei Messsonde

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

| | | | | |
|---|---|---|---|---|
| ☐ | Glasschliff: | ml | Art: | |
| ☐ | SDGF: | ml | Art: | |
| ☒ | PE: 2 x 25 | ml | Art: | |
| ☐ | Headspace: | ml | ☐ | Sonstiges: |

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur [°C]: 13

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 25.9.25

Probenehmer: [redacted] Unterschrift: [redacted]

[redacted]

# PROBENAHMEPROTOKOLL
Grundwasser

**Projekt:** Non routine Sampling **Projektnummer:** 288676

Ort: Kotterbach TK 25: Rechtswert: Hochwert:

**Messstellenbezeichnung:** GWM3_OFT. **Probenbezeichnung:** GWM3-OFF-7

Messpunkt: ☐ GOK ☑ POK **Messpunkthöhe [m NN]:**

Art der Messstelle: ☒ Bohrbrunnen ☐ Schacht ☐ Sonstige:

Rohrdurchmesser: ☐ 2 Zoll ☒ 5 Zoll ☐ Anderer [cm/Zoll]:

Filterart: ☒ PVC ☐ HDPE ☐ PTFE ☐ Stahl ☐ unbekannt ☐ Anderer:

Filteranlage von bis m u. MP

Auslotung Brunnentiefe m u. MP

| | Datum JJJJ.MM.TT | Uhrzeit h:min |
|---|---|---|
| **Probenahmezeitpunkt:** | 25.09.2025 | 11:40 |

Art der Probenahme: ☒ gepumpt ☐ geschöpft ☐ Hahn/Anlage ☐ Sonstige:

Entnahmegerät: ☒ U-Pumpe ☐ Saugpumpe ☐ Handsaugpumpe ☐ Schöpfgerät

Typ: SQ1 Messgerätesatznr.:

☐ Steigrohre Satznr.: ☐ Entnahmeleitung LDPE

Wasserspiegel: vor Entnahme: 9,16 bei Entnahme: 12,38 m u. MP

Lichtlot-Nr.: 1 Frequenz MP1: $s^{-1}$

Entnahmetiefe: 22 m u. MP Pumpdauer vor Probenahme: : 40

Stand Wasseruhr: Pumpbeginn [$m^3$]: 6 1280,787 Probenahme [$m^3$]: 1281,698

Förderstrom [l/sec]: 0,3

Leichtstoffphase vorhanden: ☐ ja ☒ nein Schichtstärke: separat beprobt: ☐ ja ☒ nein

**Untersuchungen bei der Probenahme:**

Farbe: ☒ ohne ☐ schwach ☐ stark

Farbe: –

Trübung: ☒ keine ☐ schwach ☐ stark

Geruch: ☒ ohne ☐ schwach ☐ stark

nach:

☐ nicht geprüft

Bodensatz: ☐ ja ☒ nein

filtriert: ☐ ja ☒ nein

| Zeit nach Start [min] | 5 | 10 | 20 | 30 | 40 | | | |
|---|---|---|---|---|---|---|---|---|
| GW-Stand [m u. MP] | 11,04 | 11,72 | 12,14 | 12,30 | 12,38 | | | |
| Zählerstand | 0,971 | 1,102 | 1,319 | 1,528 | 1,698 | | | |
| Förderrate [l/s] | 0,3 | 0,3 | 0,3 | 0,3 | 0,3 | | | |
| Temperatur [°C] | 12,1 | 11,8 | 11,7 | 11,7 | 11,8 | | | |
| pH-Wert [bei Wassertemp.] | 7,01 | 7,06 | 7,08 | 7,09 | 7,09 | | | |
| Sauerstoff [mg/l] | 7,57 | 7,22 | 7,38 | 7,55 | 7,49 | | | |
| LF bei 25°C [µS/cm] | – | – | – | – | – | | | |
| Redox-Spannung [mV] | 283,0 | 297,2 | 311,8 | 319,3 | 323,9 | | | |

**Bemerkungen:**

LF nicht möglich → Fehler bei Messsonde

Probengefäß (Anzahl x Volumen): Konservierung: ☐ ja ☒ nein

☐ Glasschliff: ml Art:

☐ SDGF: ml Art:

☐ PE: 2 x 25 ml Art:

☐ Headspace: ml ☐ Sonstiges:

Witterung: ☐ sonnig ☐ bewölkt ☒ Regen ☐ Schneefall Lufttemperatur [°C]: 13

Probenübergabe: ☐ vor Ort ☒ [redacted] Datum: 25.9.25

Probenehmer: [redacted] Unterschrift: [redacted]

# Anhang E
# Laborprüfberichte

E.1 Grund- und Sickerwassermessstellen on-post

E.2 Grundwassermessstellen off-post

E.3 Reinigungsanlage TS3

[redacted]

# E.1 Ground- and Perched Water Monitoring Wells on-post

# E.1 Grund- und Sickerwassermessstellen on-post

[redacted]

[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 16.10.2024 - 17.10.2024 |
| Probeneingangsdatum: | 21.10.2024 |
| Prüfzeitraum: | 21.10.2024 - 09.11.2024 |
| Gesamtseitenzahl: | 8 |

## Untersuchungsergebnis Grundwasser

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

[redacted]

[redacted]

[redacted]

[redacted]

## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM37 | GWM39 | GWM40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2470771 | AP2470772 | AP2470773 |
| Probenahmedatum | | | 16.10.2024 | 17.10.2024 | 17.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 1 | <0,01 | 0,27 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 8,9 | 0,048 | 3,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 2,1 | <0,01 | 0,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 27 | 0,11 | 5,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 4,3 | <0,01 | 0,59 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,9 | <0,01 | 0,31 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,74 | <0,01 | 0,11 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,1 | <0,01 | 0,55 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 0,37 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,93 | <0,01 | 0,13 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 2,2 | <0,01 | 0,35 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 55 | 0,16 | 11 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM70 | GWM71 | GWM78b |
|---|---|---|---|---|---|
| Labornummer | | | AP2470774 | AP2470775 | AP2470776 |
| Probenahmedatum | | | 16.10.2024 | 17.10.2024 | 17.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,83 | <0,01 | 0,025 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 16 | 0,18 | 0,26 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,77 | 0,14 | 0,035 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,8 | 1,3 | 0,51 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 0,074 | 0,07 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,31 | 0,033 | 0,047 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | <0,01 | 0,017 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,6 | <0,01 | 0,061 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,024 | 0,026 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,38 | 0,017 | 0,014 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,013 | 0,033 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 34 | 1,8 | 1,1 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM80a | GWM81a | GWM81a QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2470777 | AP2470778 | AP2470779 |
| Probenahmedatum | | | 17.10.2024 | 17.10.2024 | 17.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,56 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,9 | 0,15 | 0,16 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,83 | <0,01 | 0,012 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 15 | 0,42 | 0,43 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 3 | 0,012 | 0,012 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 0,013 | 0,012 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,5 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,5 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,64 | 0,012 | 0,012 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 30 | 0,61 | 0,64 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM82a | GWM82a QA/QC | GWM84a |
|---|---|---|---|---|---|
| Labornummer | | | AP2470780 | AP2470781 | AP2470782 |
| Probenahmedatum | | | 17.10.2024 | 17.10.2024 | 16.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,19 | 0,084 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,9 | 3 | 1,7 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | 0,27 | 0,41 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 4,5 | 4,4 | 4,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,5 | 0,71 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,21 | 0,21 | 0,11 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,12 | 0,21 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,48 | 0,54 | 1,3 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,26 | 0,17 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 0,14 | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,36 | 0,36 | 0,74 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 9,9 | 10 | 10 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM84b | GWM84b QA/QC | GWM85a |
|---|---|---|---|---|---|
| Labornummer | | | AP2470783 | AP2470784 | AP2470785 |
| Probenahmedatum | | | 16.10.2024 | 16.10.2024 | 17.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,08 | 0,67 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,097 | 1,7 | 9,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 0,4 | 0,65 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,82 | 4,5 | 13 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,069 | 0,72 | 1,4 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,035 | 0,11 | 0,64 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,21 | 0,29 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,4 | 1,5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,17 | 0,88 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,017 | 0,29 | 0,41 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,019 | 0,74 | 0,89 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 | 10 | 30 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM86 | GWM90 | GWM91 |
|---|---|---|---|---|---|
| Labornummer | | | AP2470786 | AP2470787 | AP2470788 |
| Probenahmedatum | | | 16.10.2024 | 16.10.2024 | 16.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,45 | 0,03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 16 | 28 | 2,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,55 | 0,48 | 0,07 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 4,4 | 1,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,1 | 1,1 | 0,32 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | 0,16 | 0,14 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,5 | 0,33 | 0,15 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | 0,02 | 0,047 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 1,7 | 0,019 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | 0,01 | 0,047 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | 0,3 | 0,057 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,6 | 0,42 | 0,09 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,6 | 1,1 | 0,35 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 30 | 39 | 5,5 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM92a |
|---|---|---|---|
| Labornummer | | | AP2470789 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,81 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,045 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,61 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,08 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,021 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,059 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,072 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,8 |

GWM90 (Labornummer: AP2470787):
PFHxS, PFOS: Werte durch Doppelbestimmung bestätigt.

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 21.10.2024 - 22.10.2024 |
| Probeneingangsdatum: | 25.10.2024 |
| Prüfzeitraum: | 25.10.2024 - 11.11.2024 |
| Gesamtseitenzahl: | 8 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM37 - 21-10-2024 | GWM39 - 21-10-2024 | GWM40 - 22-10-2024 |
|---|---|---|---|---|---|
| Labornummer | | | AP2472700 | AP2472701 | AP2472702 |
| Probenahmedatum | | | 21.10.2024 | 21.10.2024 | 22.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,55 | <0,01 | 0,28 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 9,9 | 0,052 | 3,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,32 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 18 | 0,11 | 5,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,8 | <0,01 | 0,55 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | <0,01 | 0,31 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,54 | <0,01 | 0,12 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,3 | <0,01 | 0,64 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,7 | <0,01 | 0,37 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,62 | <0,01 | 0,12 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,6 | <0,01 | 0,34 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 41 | 0,16 | 12 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM70 - 21-10-2024 | GWM71 - 21-10-2024 | GWM71 - 21-10-2024 - QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2472703 | AP2472704 | AP2472705 |
| Probenahmedatum | | | 21.10.2024 | 21.10.2024 | 21.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,75 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 14 | 0,2 | 0,22 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,66 | 0,16 | 0,18 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,5 | 1,3 | 1,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,069 | 0,068 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 0,033 | 0,036 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,5 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 1 | 0,027 | 0,028 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | 0,016 | 0,018 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,91 | 0,015 | 0,016 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 30 | 1,8 | 2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM78a - 21-10-2024 | GWM78b - 21-10-2024 | GWM80a - 22-10-2024 |
|---|---|---|---|---|---|
| Labornummer | | | AP2472706 | AP2472707 | AP2472708 |
| Probenahmedatum | | | 21.10.2024 | 21.10.2024 | 22.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 1 | 0,039 | 2 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 24 | 0,39 | 4,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,6 | 0,049 | 3,9 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 24 | 0,7 | 46 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 4,5 | 0,1 | 7,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 0,065 | 3,8 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,81 | 0,025 | 1,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 8,8 | 0,11 | 9,5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,9 | 0,042 | 2,4 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,91 | 0,023 | 1,4 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 2 | 0,051 | 3,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 70 | 1,6 | 85 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM80a - 22-10-2024 - QA/QC | GWM81a - 21-10-2024 | GWM82a - 21-10-2024 |
|---|---|---|---|---|---|
| Labornummer | | | AP2472709 | AP2472710 | AP2472711 |
| Probenahmedatum | | | 22.10.2024 | 21.10.2024 | 21.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 1,9 | <0,01 | 0,22 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,5 | 0,16 | 3,3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 3,6 | 0,013 | 0,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 45 | 0,47 | 4,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 7,2 | 0,012 | 0,54 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 3,6 | 0,014 | 0,24 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | <0,01 | 0,14 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 11 | <0,01 | 0,65 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,014 | 0,31 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,14 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 3,1 | <0,01 | 0,43 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 88 | 0,68 | 11 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM84a - 21-10-2024 | GWM84b - 21-10-2024 | GWM84b - 21-10-2024 - QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2472712 | AP2472713 | AP2472714 |
| Probenahmedatum | | | 21.10.2024 | 21.10.2024 | 21.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,079 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,6 | 0,092 | 0,097 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,41 | 0,12 | 0,11 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 4,8 | 0,9 | 0,85 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,75 | 0,067 | 0,062 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,037 | 0,035 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,5 | <0,01 | 0,011 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,018 | 0,018 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,019 | 0,017 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,81 | 0,021 | 0,02 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 11 | 1,3 | 1,2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM85a - 22-10-2024 | GWM86 - 21-10-2024 |
|---|---|---|---|---|
| Labornummer | | | AP2472715 | AP2472716 |
| Probenahmedatum | | | 22.10.2024 | 21.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 2,4 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 9,4 | 17 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 0,78 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 12 | 8,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 2,7 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,53 | 0,54 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | 0,61 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,019 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 1,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,8 | 0,52 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | 0,61 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,8 | 2,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 28 | 37 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM91 - 21-10-2024 | GWM92a - 22-10-2024 |
|---|---|---|---|---|
| Labornummer | | | AP2472717 | AP2472718 |
| Probenahmedatum | | | 21.10.2024 | 22.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,066 | 0,02 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,1 | 1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,081 | 0,057 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 1,9 | 0,74 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | 0,086 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,14 | 0,031 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,1 | 0,028 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,072 | 0,073 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,038 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,055 | 0,033 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,21 | 0,098 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 6,1 | 2,2 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 31.10.2024 |
| Prüfzeitraum: | 31.10.2024 - 13.11.2024 |
| Gesamtseitenzahl: | 8 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM37 | GWM39 | GWM39 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2473972 | AP2473973 | AP2473974 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,7 | 0,039 | 0,047 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,92 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 13 | 0,089 | 0,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,81 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,39 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,2 | 0,029 | 0,033 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,58 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,41 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 30 | 0,16 | 0,18 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM40 | GWM70 | GWM71 |
|---|---|---|---|---|---|
| Labornummer | | | AP2473975 | AP2473976 | AP2473977 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | 0,58 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,4 | 9,7 | 0,18 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,33 | 0,56 | 0,18 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5,4 | 8,1 | 1,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,62 | 1,1 | 0,076 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 0,32 | 0,034 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,24 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 1,3 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,4 | 0,77 | 0,028 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,23 | 0,02 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 0,79 | 0,015 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 12 | 24 | 1,9 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM78a | GWM78b | GWM80a |
|---|---|---|---|---|---|
| Labornummer | | | AP2473978 | AP2473979 | AP2473980 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,88 | 0,053 | 2,6 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 20 | 0,42 | 5,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 0,054 | 4,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 21 | 0,8 | 68 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 3,8 | 0,12 | 11 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 0,073 | 5,1 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,79 | 0,028 | 1,9 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,1 | 0,14 | 11 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,82 | 0,05 | 2,4 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,91 | 0,026 | 2,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 0,06 | 4,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 59 | 1,8 | 120 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM81a | GWM82a | GWM82a QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2473981 | AP2473982 | AP2473983 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | 0,18 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,14 | 2,9 | 2,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,27 | 0,24 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 4,2 | 4,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,49 | 0,46 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,23 | 0,21 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | 0,12 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,56 | 0,52 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,3 | 0,29 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,38 | 0,36 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,66 | 9,8 | 9,7 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM84a | GWM84b | GWM85a |
|---|---|---|---|---|---|
| Labornummer | | | AP2473984 | AP2473985 | AP2473986 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,076 | <0,01 | 0,9 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,7 | 0,096 | 12 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,36 | 0,11 | 1,1 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 4,6 | 0,95 | 17 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,71 | 0,073 | 2,2 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,039 | 1,2 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | 0,01 | 0,46 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 0,011 | 2,2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,018 | 1,2 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,018 | 0,41 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,81 | 0,021 | 1,3 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 10 | 1,3 | 40 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM85a QA/QC | GWM86 |
|---|---|---|---|---|
| Labornummer | | | AP2473987 | AP2473988 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,87 | 4,4 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 12 | 19 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1 | 1,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 16 | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,2 | 3,4 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,87 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | 0,82 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,019 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 | 3,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 1,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,43 | 0,7 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 2,6 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 38 | 49 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM91 | GWM92a |
|---|---|---|---|---|
| Labornummer | | | AP2473989 | AP2473990 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,072 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5 | 0,24 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | 0,019 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,7 | 0,34 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,42 | 0,066 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,23 | 0,026 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,15 | 0,018 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,046 | 0,019 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,24 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,093 | 0,016 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,36 | 0,062 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 10 | 0,81 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 08.11.2024 |
| Prüfzeitraum: | 08.11.2024 - 22.11.2024 |
| Gesamtseitenzahl: | 8 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM37 | GWM39 | GWM39 - QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2475919 | AP2475920 | AP2475921 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 13 | 0,034 | 0,037 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,61 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,9 | 0,07 | 0,077 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,7 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,2 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,59 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,37 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,97 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 32 | 0,1 | 0,11 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM40 | GWM70 | GWM71 |
|---|---|---|---|---|---|
| Labornummer | | | AP2475922 | AP2475923 | AP2475924 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,099 | 0,51 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,5 | 10 | 0,15 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,61 | 0,11 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,3 | 5,9 | 1,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,52 | 0,93 | 0,067 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 0,31 | 0,03 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,21 | 0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,2 | 0,77 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 0,56 | 0,018 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,079 | 0,21 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 0,68 | 0,011 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 6,7 | 21 | 1,6 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM71 - QA/QC | GWM78a | GWM78b |
|---|---|---|---|---|---|
| Labornummer | | | AP2475925 | AP2475926 | AP2475927 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,74 | 0,047 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,15 | 15 | 0,53 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,088 | 1,1 | 0,044 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 22 | 0,69 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,063 | 4,5 | 0,12 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 1,7 | 0,065 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,83 | 0,016 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 5,1 | 0,11 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,022 | 0,73 | 0,059 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,98 | 0,015 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 1,8 | 0,058 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,5 | 54 | 1,8 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM78b - QA/QC | GWM79a | GWM80a |
|---|---|---|---|---|---|
| Labornummer | | | AP2475928 | AP2475929 | AP2475930 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,04 | 0,015 | 3,1 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,46 | 0,36 | 12 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,036 | 0,023 | 5,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,7 | 0,44 | 72 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,048 | 14 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,071 | 0,015 | 7 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,023 | 0,012 | 2,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,028 | 12 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,048 | 0,027 | 4,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,017 | 0,017 | 3,1 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,055 | 0,056 | 6,2 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,7 | 1 | 140 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM81a | GWM82a | GWM84a |
|---|---|---|---|---|---|
| Labornummer | | | AP2475931 | AP2475932 | AP2475933 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,15 | 0,059 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 2,5 | 1,3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,38 | 3,8 | 4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,51 | 0,73 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,21 | 0,11 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,059 | 0,13 | 0,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,33 | 0,77 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | 0,12 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,096 | 0,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,77 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,57 | 8,6 | 8,5 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM84b | GWM85a | GWM88 |
|---|---|---|---|---|---|
| Labornummer | | | AP2475934 | AP2475935 | AP2475936 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1 | 0,46 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,097 | 16 | 26 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,085 | 1,5 | 1,1 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,84 | 22 | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,062 | 2,3 | 2,7 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,036 | 1,4 | 0,57 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,84 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 2,2 | 3,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 1,2 | 0,91 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,45 | 0,82 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 1,6 | 3,2 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 | 50 | 53 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM91 | GWM92a |
|---|---|---|---|---|
| Labornummer | | | AP2475937 | AP2475938 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,044 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,9 | 0,68 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | 0,027 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,3 | 0,49 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 0,072 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,19 | 0,025 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,015 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,042 | 0,04 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,021 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,071 | 0,015 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 0,066 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 8,6 | 1,5 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 06.12.2024 |
| Prüfzeitraum: | 06.12.2024 - 19.12.2024 |
| Gesamtseitenzahl: | 8 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2483352 | AP2483353 | AP2483354 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | <0,01 | 0,26 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,9 | 0,02 | 3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,79 | <0,01 | 0,29 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,8 | 0,057 | 5,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,5 | <0,01 | 0,54 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | <0,01 | 0,28 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,11 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,5 | <0,01 | 0,47 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,5 | <0,01 | 0,35 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,35 | <0,01 | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,88 | <0,01 | 0,31 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 24 | 0,077 | 11 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 71-QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2483355 | AP2483356 | AP2483357 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,6 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,3 | 0,21 | 0,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,097 | 0,096 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8 | 1,1 | 1,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,061 | 0,058 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,028 | 0,027 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,027 | 0,025 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,012 | 0,012 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 0,011 | 0,011 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 21 | 1,5 | 1,5 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78A | GWM 78B | GWM 78B-QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2483358 | AP2483359 | AP2483360 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,054 | 0,053 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 18 | 0,48 | 0,48 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,059 | 0,059 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 11 | 0,82 | 0,85 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 3,7 | 0,13 | 0,14 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,83 | 0,077 | 0,078 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,029 | 0,029 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,2 | 0,15 | 0,15 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,63 | 0,056 | 0,058 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,74 | 0,025 | 0,025 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 3,3 | 0,065 | 0,065 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 46 | 1,9 | 2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 79A | GWM 80A | GWM 81A |
|---|---|---|---|---|---|
| Labornummer | | | AP2483361 | AP2483362 | AP2483363 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 3,5 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,076 | 16 | 0,12 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 11 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,21 | 100 | 0,46 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,034 | 16 | 0,013 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 7,7 | 0,013 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 2,7 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 25 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 6,3 | 0,013 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 3,7 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,05 | 7,2 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,4 | 200 | 0,62 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 82A | GWM 84A | GWM 84A-QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2483364 | AP2483365 | AP2483366 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,18 | 0,05 | 0,051 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,9 | 1,6 | 1,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,33 | 0,32 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,9 | 4,1 | 4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,49 | 0,66 | 0,67 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,2 | 0,096 | 0,096 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,19 | 0,19 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 1,1 | 1,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,27 | 0,15 | 0,14 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,23 | 0,22 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 0,69 | 0,69 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 9,3 | 9,2 | 9 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 88 |
|---|---|---|---|---|---|
| Labornummer | | | AP2483367 | AP2483368 | AP2483369 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,44 | 0,4 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,071 | 5,8 | 21 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,079 | 0,58 | 1,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,7 | 9,1 | 9,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,049 | 1 | 2,5 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,024 | 0,38 | 0,54 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,24 | 0,68 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,3 | 4,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,64 | 0,83 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,28 | 0,71 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,78 | 2,6 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,96 | 21 | 45 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 91 | GWM 92A |
|---|---|---|---|---|
| Labornummer | | | AP2483370 | AP2483371 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,05 | 0,015 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,09 | 0,049 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 2,5 | 0,68 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | 0,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,14 | 0,029 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,072 | 0,025 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,076 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,031 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,054 | 0,032 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,16 | 0,095 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 5,8 | 2,1 |

PFT: Werte durch Doppelbestimmung bestätigt.

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 20.01.2025 |
| Prüfzeitraum: | 20.01.2025 - 29.01.2025 |
| Gesamtseitenzahl: | 9 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2501814 | AP2501815 | AP2501816 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,27 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 0,039 | 3,1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,6 | <0,01 | 0,33 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5,8 | 0,1 | 4,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,56 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,38 | <0,01 | 0,31 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 0,11 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | <0,01 | 0,51 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,36 | <0,01 | 0,36 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | <0,01 | 0,13 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,77 | <0,01 | 0,34 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 18 | 0,14 | 11 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2501817 | AP2501818 | AP2501819 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,53 | <0,01 | 0,71 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 0,17 | 56 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,74 | 0,083 | 1,1 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,8 | 0,94 | 6,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,5 | 0,047 | 1,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,64 | 0,025 | 0,27 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | 0,54 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,036 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,036 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,64 | 0,021 | 0,49 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,4 | 0,013 | 0,82 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,75 | <0,01 | 1,9 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 | 1,3 | 72 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2501820 | AP2501821 | AP2501822 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,058 | <0,01 | 3,6 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,15 | 12 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,056 | <0,01 | 10 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,84 | 0,15 | 140 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 0,023 | 16 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,075 | <0,01 | 8,2 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,028 | <0,01 | 2,9 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,15 | <0,01 | 24 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,051 | <0,01 | 5,8 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | <0,01 | 4,4 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,061 | 0,025 | 7,6 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 2 | 0,35 | 230 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2501823 | AP2501824 | AP2501825 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,16 | 0,038 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 2,6 | 1,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,25 | 0,27 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 3,7 | 3,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,46 | 0,58 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,2 | 0,09 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | 0,17 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,44 | 0,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,28 | 0,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | 0,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,34 | 0,62 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,63 | 8,7 | 7,5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 86 |
|---|---|---|---|---|---|
| Labornummer | | | AP2501826 | AP2501827 | AP2501828 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,39 | 3,3 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,053 | 6,1 | 18 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,064 | 0,53 | 0,6 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,52 | 9,4 | 4,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,037 | 0,89 | 1,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,02 | 0,35 | 0,23 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,24 | 0,32 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,022 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,3 | 1,2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,017 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,74 | 0,47 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | 0,37 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,73 | 0,99 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,69 | 21 | 31 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 87 | GWM 88 | GWM 90 |
|---|---|---|---|---|---|
| Labornummer | | | AP2501829 | AP2501830 | AP2501831 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 10 | 5,9 | 3,4 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 180 | 110 | 130 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 14 | 8 | 4,1 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 63 | 66 | 34 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 17 | 15 | 5,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 2,2 | 2,6 | 0,91 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 5,2 | 4,2 | 1,8 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | 0,12 | 0,23 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 35 | 20 | 11 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | <0,1 | <0,1 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 4,1 | 2,4 | 1,9 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 5,5 | 2,1 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 18 | 15 | 6,2 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 360 | 250 | 200 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 91 | GWM 92A |
|---|---|---|---|---|
| Labornummer | | | AP2501832 | AP2501833 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,019 | 0,013 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,72 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,083 | 0,04 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 1,6 | 0,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 0,091 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,028 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,027 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,054 | 0,059 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,053 | 0,026 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,087 | 0,026 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 0,092 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 3,8 | 1,7 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2501834 | AP2501835 | AP2501836 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,25 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,032 | 3 | 0,15 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,32 | 0,062 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,082 | 4,8 | 0,75 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,56 | 0,034 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,022 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,49 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,36 | 0,018 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,13 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,11 | 11 | 1 |

Analytik Institut Rietzler GmbH, Fürth, den 29.01.2025

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 13.02.2025 |
| Prüfzeitraum: | 13.02.2025 - 18.02.2025 |
| Gesamtseitenzahl: | 9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2506597 | AP2506598 | AP2506599 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,23 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 0,036 | 2,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,4 | <0,01 | 0,2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,3 | 0,089 | 4,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | <0,01 | 0,53 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | <0,01 | 0,29 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,02 | 0,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | <0,01 | 0,5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 0,25 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | <0,01 | 0,1 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,72 | <0,01 | 0,29 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 18 | 0,13 | 10 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78B |
|---|---|---|---|---|---|
| Labornummer | | | AP2506600 | AP2506601 | AP2506602 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | <0,01 | 0,047 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6 | 0,14 | 0,41 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | 0,034 | 0,033 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,7 | 0,75 | 0,66 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 0,039 | 0,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,56 | 0,023 | 0,063 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | <0,02 | 0,032 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | <0,01 | 0,13 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,44 | 0,014 | 0,033 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | <0,01 | 0,018 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,63 | <0,01 | 0,053 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 21 | 1 | 1,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 79A | GWM 80A | GWM 81A |
|---|---|---|---|---|---|
| Labornummer | | | AP2506603 | AP2506604 | AP2506605 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 4 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,098 | 12 | 0,084 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 12 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 150 | 0,37 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 18 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 9 | 0,011 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,02 | 2,9 | <0,02 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 32 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 7 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 3,6 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 8,2 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,25 | 260 | 0,47 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 82A | GWM 84A | GWM 84B |
|---|---|---|---|---|---|
| Labornummer | | | AP2506606 | AP2506607 | AP2506608 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,16 | 0,03 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,3 | 1,1 | 0,049 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,15 | 0,27 | 0,052 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,6 | 3,7 | 0,41 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,41 | 0,59 | 0,033 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,18 | 0,086 | 0,018 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,1 | 0,16 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,45 | 0,76 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,18 | 0,11 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,092 | 0,2 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 0,6 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 7,9 | 7,6 | 0,56 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 85A | GWM 88 | GWM 90 |
|---|---|---|---|---|---|
| Labornummer | | | AP2506609 | AP2506610 | AP2506611 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,62 | 1,1 | 1,1 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 8,4 | 43 | 79 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 4 | 1,2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 11 | 28 | 16 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 9,4 | 2,8 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,56 | 1,6 | 0,49 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 2,3 | 0,74 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,021 | 0,089 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 15 | 3,2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,034 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,8 | 1,4 | 0,97 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 3,3 | 0,81 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,86 | 8,9 | 2,4 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 26 | 120 | 110 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 91 | GWM 92A |
|---|---|---|---|---|
| Labornummer | | | AP2506612 | AP2506613 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,053 | 0,018 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,1 | 1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,06 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 2,2 | 0,64 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,31 | 0,12 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,033 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,035 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,077 | 0,093 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,081 | 0,033 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,093 | 0,042 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,33 | 0,12 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 6,6 | 2,2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | QA/QC GWM 39 | QA/QC GWM 40 | QA/QC GWM 71 |
|---|---|---|---|---|---|
| Labornummer | | | AP2506614 | AP2506615 | AP2506616 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,27 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,035 | 2,9 | 0,17 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,051 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,077 | 5,3 | 0,82 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,55 | 0,044 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | 0,023 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,45 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,33 | 0,018 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,14 | 0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,11 | 11 | 1,1 |

GWM 37 (Labornummer: AP2506597):
PFOS und PFHxS: Werte durch Doppelbestimmung bestätigt.

GWM 39 (Labornummer: AP2506598):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

GWM 70 (Labornummer: AP2506600):
PFOS und PFHxS: Werte durch Doppelbestimmung bestätigt.

GWM 71 (Labornummer: AP2506601):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

GWM 79A (Labornummer: AP2506603):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

GWM 80A (Labornummer: AP2506604):
PFT: Werte durch Doppelbestimmung bestätigt.

GWM 81A (Labornummer: AP2506605):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

GWM 84A (Labornummer: AP2506607):
PFHxS: Wert durch Doppelbestimmung bestätigt.

GWM 85A (Labornummer: AP2506609):
PFHxS und PFOS: Werte durch Doppelbestimmung bestätigt.

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GWM 88 (Labornummer: AP2506610):
PFT: Werte durch Doppelbestimmung bestätigt.

GWM 90 (Labornummer: AP2506611):
PFHxS und PFOS: Werte durch Doppelbestimmung bestätigt.

QA/QC GWM 40 (Labornummer: AP2506615):
PFHxS: Wert durch Doppelbestimmung bestätigt.

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 12.03.2025 |
| Prüfzeitraum: | 12.03.2025 - 26.03.2025 |
| Gesamtseitenzahl: | 9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2513274 | AP2513275 | AP2513276 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | <0,01 | 0,18 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,3 | 0,036 | 2,3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,56 | <0,01 | 0,24 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,7 | 0,088 | 4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,43 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,41 | <0,01 | 0,25 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | <0,01 | 0,088 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | <0,01 | 0,38 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,26 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | <0,01 | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,81 | <0,01 | 0,25 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 17 | 0,12 | 8,5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2513277 | AP2513278 | AP2513279 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,53 | <0,01 | 0,61 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,9 | 0,14 | 21 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,68 | 0,078 | 1,7 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9 | 0,83 | 13 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 0,043 | 8 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,56 | 0,023 | 1 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | <0,01 | 2,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,7 | <0,01 | 6,8 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 0,019 | 0,79 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 0,012 | 1,9 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,68 | <0,01 | 7,7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 | 1,1 | 65 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2513280 | AP2513281 | AP2513282 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,046 | <0,01 | 2,7 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,43 | 0,12 | 9,1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,04 | 0,01 | 11 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,21 | 140 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,096 | 0,031 | 18 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,055 | <0,01 | 8,7 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | 0,016 | 2,8 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,11 | <0,01 | 27 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,042 | <0,01 | 5,4 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,022 | 0,013 | 4,5 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,048 | 0,045 | 8,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,5 | 0,45 | 240 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2513283 | AP2513284 | AP2513285 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,16 | 0,027 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,09 | 2,5 | 0,98 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,22 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,35 | 3,6 | 3,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,43 | 0,55 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,01 | 0,18 | 0,084 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | 0,16 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,47 | 0,88 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,25 | 0,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | 0,19 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,58 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,45 | 8,3 | 7,3 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 86 |
|---|---|---|---|---|---|
| Labornummer | | | AP2513286 | AP2513287 | AP2513288 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,67 | 4,8 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,037 | 8 | 20 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,037 | 0,7 | 1,1 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | 11 | 9,3 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 1,1 | 1,8 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,42 | 0,47 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | 0,4 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,02 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,6 | 2,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,017 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1 | 1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,33 | 0,45 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,86 | 1,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,48 | 26 | 43 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 88 | GWM 90 | GWM 91 |
|---|---|---|---|---|---|
| Labornummer | | | AP2513289 | AP2513290 | AP2513291 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 2,2 | 1,7 | 0,44 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 49 | 76 | 13 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 4 | 1,9 | 0,36 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 29 | 22 | 5,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 10 | 3,8 | 0,65 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 0,77 | 0,22 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 2,7 | 0,94 | 0,18 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | 0,031 | 0,081 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 15 | 4,1 | 0,72 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,029 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 2,1 | 1,4 | 0,71 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 3,2 | 1,1 | 0,19 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 9,8 | 3,2 | 0,53 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 130 | 120 | 23 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 92A | QA/QC 39 | QA/QC 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2513292 | AP2513293 | AP2513294 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,012 | <0,01 | 0,18 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,69 | 0,036 | 2,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,039 | <0,01 | 0,23 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,089 | 3,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,097 | <0,01 | 0,42 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,027 | <0,01 | 0,24 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | <0,01 | 0,086 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,062 | <0,01 | 0,43 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,025 | <0,01 | 0,26 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,029 | <0,01 | 0,1 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,092 | <0,01 | 0,24 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,7 | 0,13 | 8,3 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | QA/QC 71 |
|---|---|---|---|
| Labornummer | | | AP2513295 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,14 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,08 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,041 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,022 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,019 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,1 |

Der Bericht ersetzt Prüfbericht AB2503285 vom 26.03.2025.
Die Probenbezeichnungen wurden teilweise korrigiert.

Analytik Institut Rietzler GmbH, Fürth, den 27.03.2025

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

[redacted]

[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 11.04.2025 |
| Prüfzeitraum: | 11.04.2025 - 24.04.2025 |
| Gesamtseitenzahl: | 8 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2519973 | AP2519974 | AP2519975 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | <0,01 | 0,19 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7 | 0,035 | 2,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,59 | <0,01 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,3 | 0,096 | 4,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 0,49 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,43 | <0,01 | 0,26 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | 0,089 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | <0,01 | 0,41 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,28 | <0,01 | 0,21 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,36 | <0,01 | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,88 | <0,01 | 0,27 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 20 | 0,13 | 8,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 88 | GWM 71 |
|---|---|---|---|---|---|
| Labornummer | | | AP2519976 | AP2519977 | AP2519978 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,52 | 1 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,1 | 36 | 0,13 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,68 | 3,1 | 0,081 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,9 | 19 | 0,81 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 7,8 | 0,045 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,57 | 1,1 | 0,024 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,24 | 2 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,022 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,8 | 12 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,54 | 1,2 | 0,014 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 2,6 | 0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,72 | 7,6 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 | 93 | 1,1 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78A | GWM 78B | GWM 79A |
|---|---|---|---|---|---|
| Labornummer | | | AP2519979 | AP2519980 | AP2519981 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 0,047 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 24 | 0,45 | 0,097 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 2 | 0,043 | 0,011 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 19 | 0,63 | 0,18 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 9,5 | 0,11 | 0,03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | 0,062 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 2,5 | 0,024 | 0,016 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,4 | 0,13 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 0,034 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 2,7 | 0,023 | 0,014 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 8,4 | 0,054 | 0,049 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 78 | 1,6 | 0,4 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84A | GWM 85A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2519982 | AP2519983 | AP2519984 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,033 | 0,71 | 3,1 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 8,9 | 9,3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,31 | 0,78 | 8,8 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 4,4 | 13 | 140 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 1,7 | 18 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,1 | 0,82 | 8,2 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,34 | 3,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,96 | 1,4 | 27 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,13 | 0,8 | 6 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | 0,38 | 4,1 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 1,1 | 8,7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 8,9 | 30 | 240 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84B |
|---|---|---|---|---|---|
| Labornummer | | | AP2519985 | AP2519986 | AP2519987 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,16 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,084 | 2,5 | 0,035 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,23 | 0,036 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,38 | 3,8 | 0,36 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,46 | 0,025 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,19 | 0,015 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,47 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,34 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,5 | 8,6 | 0,47 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 90 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2519988 | AP2519989 | AP2519990 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,66 | 0,32 | 0,016 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 24 | 7,8 | 1,1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 2 | 0,34 | 0,064 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 18 | 6,7 | 0,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 9,7 | 0,78 | 0,15 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | 0,37 | 0,036 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,17 | 0,039 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,2 | 0,43 | 0,11 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,7 | 0,45 | 0,027 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 2,6 | 0,19 | 0,049 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 8,3 | 0,5 | 0,16 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 77 | 18 | 2,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | QA/QC 39 | QA/QC 40 | QA/QC 71 |
|---|---|---|---|---|---|
| Labornummer | | | AP2519991 | AP2519992 | AP2519993 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,035 | 2,1 | 0,13 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | 0,078 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,095 | 4 | 0,79 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,46 | 0,044 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,25 | 0,024 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,085 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,4 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,22 | 0,014 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | 0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,13 | 8,3 | 1,1 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 09.05.2025 |
| Prüfzeitraum: | 09.05.2025 - 16.05.2025 |
| Gesamtseitenzahl: | 8 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2526089 | AP2526090 | AP2526091 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,21 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,2 | 0,036 | 2,3 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,49 | <0,01 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5,1 | 0,077 | 3,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,49 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | <0,01 | 0,27 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,086 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 | <0,01 | 0,38 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,17 | <0,01 | 0,15 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | <0,01 | 0,12 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,78 | <0,01 | 0,27 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 18 | 0,11 | 8,4 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2526092 | AP2526093 | AP2526094 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | <0,01 | 0,49 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,2 | 0,12 | 31 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 0,059 | 2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,8 | 0,65 | 15 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 0,044 | 8,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,5 | 0,024 | 1 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,2 | <0,01 | 2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 7,8 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,32 | <0,01 | 0,34 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | <0,01 | 2,7 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,63 | <0,01 | 7,9 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 20 | 0,9 | 79 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2526095 | AP2526096 | AP2526097 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,039 | <0,01 | 3,3 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,38 | 0,12 | 14 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,039 | 0,011 | 10 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,54 | 0,18 | 120 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,027 | 16 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,056 | <0,01 | 7,8 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,026 | 0,016 | 2,5 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,11 | <0,01 | 26 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,019 | <0,01 | 4,8 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,022 | 0,015 | 4,9 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,047 | 0,038 | 8,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,4 | 0,41 | 220 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2526098 | AP2526099 | AP2526100 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,15 | 0,04 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,084 | 2,4 | 1,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,21 | 0,37 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 3,1 | 4,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,45 | 0,68 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,18 | 0,095 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,093 | 0,18 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,43 | 1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,13 | 0,095 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,13 | 0,27 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,68 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,42 | 7,6 | 9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 88 |
|---|---|---|---|---|---|
| Labornummer | | | AP2526101 | AP2526102 | AP2526105 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,73 | 0,54 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,033 | 9,8 | 31 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,032 | 0,7 | 1,8 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 10 | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 1,3 | 4,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,5 | 0,71 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,27 | 1,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,4 | 6,4 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,57 | 0,54 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 1,6 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,94 | 4,7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,45 | 27 | 65 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 90 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2526107 | AP2526108 | AP2526109 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 0,19 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 45 | 5 | 0,22 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,4 | 0,22 | 0,025 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 14 | 4,5 | 0,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 5 | 0,57 | 0,095 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,75 | 0,28 | 0,026 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 1,3 | 0,13 | 0,027 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | 0,026 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 5 | 0,14 | 0,037 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | 0,022 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,48 | 0,18 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 1,7 | 0,14 | 0,028 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 4,7 | 0,4 | 0,089 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 80 | 12 | 0,95 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2526110 | AP2526111 | AP2526112 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,036 | 2,2 | 0,11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,24 | 0,061 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,081 | 3,9 | 0,64 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,48 | 0,041 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | 0,023 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,085 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,14 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,12 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,12 | 8,3 | 0,88 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 02.06.2025 |
| Probeneingangsdatum: | 02.06.2025 |
| Prüfzeitraum: | 02.06.2025 - 17.06.2025 |
| Gesamtseitenzahl: | 8 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2532027 | AP2532028 | AP2532029 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,19 | <0,01 | 0,21 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,7 | 0,039 | 2,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,44 | <0,01 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5,1 | 0,09 | 4,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | <0,01 | 0,46 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,41 | <0,01 | 0,29 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | 0,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 | <0,01 | 0,4 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,28 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | <0,01 | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,78 | <0,01 | 0,27 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 | 0,13 | 9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2532030 | AP2532031 | AP2532032 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,48 | <0,01 | 0,49 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,6 | 0,11 | 21 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,6 | 0,073 | 1,9 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8 | 0,72 | 11 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,044 | 6,5 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,56 | 0,027 | 0,84 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 1,8 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,016 | 0,56 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,62 | <0,01 | 7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 19 | 0,99 | 59 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2532033 | AP2532034 | AP2532035 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,05 | <0,01 | 2,9 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,088 | 11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,046 | <0,01 | 8,8 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 0,15 | 110 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,023 | 18 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,067 | <0,01 | 9,9 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,017 | 3 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,13 | <0,01 | 21 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,04 | <0,01 | 5,7 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,023 | 0,011 | 4,8 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,058 | 0,038 | 8,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,6 | 0,33 | 200 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2532036 | AP2532037 | AP2532038 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,15 | 0,044 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,092 | 2,3 | 1,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,01 | 0,2 | 0,33 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 3,5 | 4,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,41 | 0,63 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,2 | 0,11 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | 0,19 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,42 | 0,82 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,01 | 0,22 | 0,18 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | 0,23 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,65 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,48 | 7,9 | 8,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 88 |
|---|---|---|---|---|---|
| Labornummer | | | AP2532039 | AP2532040 | AP2532041 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,72 | 0,45 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,036 | 9,5 | 18 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,029 | 0,79 | 1,6 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 13 | 10 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,02 | 1,7 | 3,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,016 | 0,92 | 0,75 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 1,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,4 | 5,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1 | 0,88 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,38 | 1,3 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,1 | 5,2 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,4 | 31 | 49 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 90 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2532042 | AP2532043 | AP2532044 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,65 | 0,25 | 0,012 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 30 | 18 | 0,69 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 2,1 | 0,29 | 0,053 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 16 | 7,8 | 0,66 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 8,5 | 0,63 | 0,12 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 1,2 | 0,4 | 0,034 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 2,2 | 0,17 | 0,036 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,1 | 0,11 | 0,078 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | 0,024 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,79 | 0,76 | 0,029 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,17 | 0,04 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 8,4 | 0,48 | 0,12 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 79 | 29 | 1,9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2532045 | AP2532046 | AP2532047 |
| Probenahmedatum | | | 02.06.2025 | 02.06.2025 | 02.06.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,037 | 2,4 | 0,11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,25 | 0,067 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,084 | 4,1 | 0,7 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,47 | 0,042 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | 0,027 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,39 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,28 | 0,016 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,27 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,12 | 8,9 | 0,96 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 01.07.2025 |
| Probeneingangsdatum: | 03.07.2025 |
| Prüfzeitraum: | 03.07.2025 - 14.07.2025 |
| Gesamtseitenzahl: | 9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2539299 | AP2539300 | AP2539301 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | <0,01 | 0,21 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,4 | 0,039 | 2,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,33 | <0,01 | 0,21 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 4,6 | 0,097 | 4,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,99 | <0,01 | 0,46 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,36 | <0,01 | 0,3 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,097 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 0,35 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,27 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,086 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,68 | <0,01 | 0,25 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 13 | 0,14 | 8,8 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2539302 | AP2539303 | AP2539304 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,44 | <0,01 | 0,057 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,7 | 0,1 | 0,51 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,028 | 0,039 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,8 | 0,61 | 0,64 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,037 | 0,11 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,54 | 0,026 | 0,072 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,026 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 | <0,01 | 0,12 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,57 | 0,014 | 0,043 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,2 | <0,01 | 0,022 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,58 | <0,01 | 0,059 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 18 | 0,82 | 1,7 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2539305 | AP2539306 | AP2539307 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,33 | <0,01 | 4,2 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 22 | 0,12 | 15 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,7 | <0,01 | 8,9 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 13 | 0,16 | 120 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 5,3 | 0,022 | 17 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,78 | <0,01 | 10 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 1,7 | 0,015 | 3,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 6 | <0,01 | 22 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,6 | <0,01 | 5,8 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 1,4 | <0,01 | 3,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 5,6 | 0,038 | 8,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 58 | 0,36 | 220 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2539308 | AP2539309 | AP2539310 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,15 | 0,038 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,093 | 2,3 | 1,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,19 | 0,26 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,33 | 3,4 | 3,7 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,4 | 0,57 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,2 | 0,097 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | 0,17 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,39 | 0,67 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,23 | 0,15 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,094 | 0,17 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | 0,57 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,47 | 7,8 | 7,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 39 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2539311 | AP2539312 | AP2539313 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,66 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,036 | 10 | 0,042 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,03 | 0,56 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 10 | 0,095 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,02 | 1,1 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,016 | 0,49 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,28 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,1 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,98 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,21 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,86 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,42 | 26 | 0,14 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 40 QA/QC | GWM 88 |
|---|---|---|---|---|
| Labornummer | | | AP2539314 | AP2539315 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,19 | 0,24 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,5 | 18 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | 0,97 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,8 | 9,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,46 | 2,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 0,68 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,096 | 0,85 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | 3,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,27 | 0,74 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,078 | 0,74 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | 3,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 8,5 | 42 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 71 QA/QC | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2539316 | AP2539318 | AP2539319 |
| Probenahmedatum | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,49 | 0,011 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 15 | 0,67 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 0,58 | 0,045 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,61 | 9,9 | 0,65 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,031 | 0,93 | 0,11 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,026 | 0,56 | 0,033 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | 0,032 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,79 | 0,06 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,96 | 0,027 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,031 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,61 | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,82 | 30 | 1,8 |

GWM 37 (Labornummer: AP2539299):
PFAS: Werte durch verdünnte Messung bestätigt.

GWM 40 (Labornummer: AP2539301):
PFAS: Werte durch verdünnte Messung bestätigt.

GWM 70 (Labornummer: AP2539302):
PFAS: Werte durch verdünnte Messung bestätigt.

GWM 78A (Labornummer: AP2539304):
PFAS: Werte durch verdünnte Messung bestätigt.

GWM 78B (Labornummer: AP2539305):
PFAS: Werte durch verdünnte Messung bestätigt.

GWM 80A (Labornummer: AP2539307):
PFAS: Werte durch verdünnte Messung bestätigt.

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 31.07.2025 |
| Probeneingangsdatum: | 01.08.2025 |
| Prüfzeitraum: | 01.08.2025 - 07.08.2025 |
| Gesamtseitenzahl: | 8 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2546190 | AP2546191 | AP2546192 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,098 | <0,01 | 0,18 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,036 | 2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,21 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3,6 | 0,094 | 3,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,93 | <0,01 | 0,44 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,3 | <0,01 | 0,25 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,21 | <0,01 | 0,092 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,2 | <0,01 | 0,32 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,15 | <0,01 | 0,22 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,091 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,62 | <0,01 | 0,25 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 10 | 0,13 | 7,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2546193 | AP2546194 | AP2546195 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,44 | <0,01 | 0,5 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,8 | 0,11 | 27 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,055 | 1,9 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,5 | 0,71 | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 | 0,045 | 5,6 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,028 | 0,8 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,21 | <0,01 | 1,7 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,2 | <0,01 | 5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,016 | 0,74 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 1,7 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,58 | <0,01 | 5,7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 | 0,96 | 63 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2546196 | AP2546197 | AP2546198 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,047 | <0,01 | 5,3 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,44 | 0,092 | 24 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,04 | <0,01 | 8,3 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,59 | 0,12 | 110 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,11 | 0,02 | 17 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,07 | <0,01 | 9,5 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,017 | 3,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,12 | <0,01 | 22 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,036 | <0,01 | 5,9 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | <0,01 | 3,5 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,059 | 0,036 | 7,9 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,6 | 0,29 | 220 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2546199 | AP2546200 | AP2546201 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,14 | 0,038 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,081 | 2,2 | 1,1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,25 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,32 | 3,1 | 3,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,016 | 0,41 | 0,6 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,2 | 0,098 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | 0,17 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,57 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,19 | 0,13 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | 0,18 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,31 | 0,62 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,43 | 7,3 | 7,3 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 86 |
|---|---|---|---|---|---|
| Labornummer | | | AP2546202 | AP2546203 | AP2546204 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,76 | 5,8 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,03 | 6,6 | 13 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 0,6 | 1,7 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 9,3 | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | 1,3 | 3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 | 0,53 | 0,96 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,33 | 0,73 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,018 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,2 | 4 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,012 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,97 | 1,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,33 | 0,63 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1 | 1,7 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,37 | 23 | 45 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 88 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2546205 | AP2546206 | AP2546207 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,2 | 0,48 | 0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,7 | 12 | 0,58 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,8 | 0,32 | 0,043 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,3 | 5 | 0,61 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,7 | 0,58 | 0,12 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,66 | 0,34 | 0,034 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,76 | 0,16 | 0,035 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,7 | 0,35 | 0,054 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,63 | 0,023 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,77 | 0,14 | 0,037 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 2,8 | 0,39 | 0,12 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 27 | 20 | 1,7 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2546223 | AP2546224 | AP2546225 |
| Probenahmedatum | | | 31.07.2025 | 31.07.2025 | 31.07.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,16 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,035 | 2 | 0,11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,053 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,091 | 3,4 | 0,68 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,42 | 0,044 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,26 | 0,027 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,091 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | 0,014 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,089 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,24 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,13 | 7,3 | 0,93 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

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|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 28.08.2025 |
| Probeneingangsdatum: | 29.08.2025 |
| Prüfzeitraum: | 29.08.2025 - 08.09.2025 |
| Gesamtseitenzahl: | 8 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2552383 | AP2552384 | AP2552385 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,092 | <0,01 | 0,15 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,036 | 1,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 0,21 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 2,9 | 0,083 | 3,3 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,73 | <0,01 | 0,42 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,23 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,17 | <0,01 | 0,086 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,94 | <0,01 | 0,28 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,13 | <0,01 | 0,19 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,18 | <0,01 | 0,086 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,51 | <0,01 | 0,24 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 8,5 | 0,12 | 7,1 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2552386 | AP2552387 | AP2552388 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,36 | <0,01 | 0,44 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4 | 0,11 | 19 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,5 | 0,058 | 1,8 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,8 | 0,69 | 11 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1 | 0,043 | 4,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,44 | 0,02 | 0,77 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,2 | <0,01 | 1,6 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | <0,01 | 5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,39 | 0,014 | 0,57 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 1,7 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,56 | <0,01 | 5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 | 0,94 | 52 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2552389 | AP2552390 | AP2552391 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,042 | <0,01 | 5,6 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,39 | 0,09 | 28 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,041 | <0,01 | 7,2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,58 | 0,12 | 97 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,12 | 0,024 | 16 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,061 | <0,01 | 7,6 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,028 | 0,018 | 2,9 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,095 | <0,01 | 19 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,033 | <0,01 | 4,9 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | <0,01 | 3,6 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,057 | 0,038 | 7,3 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,5 | 0,29 | 200 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2552392 | AP2552393 | AP2552394 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,15 | 0,034 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,076 | 2,3 | 0,91 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,22 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,33 | 3,1 | 3,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,39 | 0,5 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,17 | 0,074 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,094 | 0,15 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,46 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | 0,11 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,11 | 0,16 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,28 | 0,51 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,42 | 7,3 | 6,2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A |
|---|---|---|---|---|
| Labornummer | | | AP2552395 | AP2552396 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,82 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,034 | 8,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,025 | 0,74 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | 11 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,02 | 1,6 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,7 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,3 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,98 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,38 | 28 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 88 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2552397 | AP2552398 | AP2552399 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,11 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,6 | 8,6 | 0,57 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,75 | 0,1 | 0,041 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,6 | 2,3 | 0,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,21 | 0,11 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 0,1 | 0,027 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,68 | 0,095 | 0,032 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,6 | 0,052 | 0,062 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,48 | 0,17 | 0,023 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,63 | 0,05 | 0,037 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,16 | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 25 | 12 | 1,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2552400 | AP2552401 | AP2552402 |
| Probenahmedatum | | | 28.08.2025 | 28.08.2025 | 28.08.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,029 | 2,2 | 0,11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,19 | 0,048 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,069 | 3,4 | 0,73 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,4 | 0,041 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,22 | 0,023 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,088 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | 0,017 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,087 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,23 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,098 | 7,5 | 0,97 |

Analytik Institut Rietzler GmbH, Fürth, den 08.09.2025

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 25.09.2025 |
| Probeneingangsdatum: | 26.09.2025 |
| Prüfzeitraum: | 26.09.2025 - 06.10.2025 |
| Gesamtseitenzahl: | 8 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 37 | GWM 39 | GWM 40 |
|---|---|---|---|---|---|
| Labornummer | | | AP2558588 | AP2558589 | AP2558590 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,45 | <0,01 | 0,15 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 14 | 0,035 | 1,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 0,16 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 3 | 0,094 | 3 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,57 | <0,01 | 0,36 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,18 | <0,01 | 0,19 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | <0,01 | 0,081 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1 | <0,01 | 0,27 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,2 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,16 | <0,01 | 0,085 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,42 | <0,01 | 0,22 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 20 | 0,13 | 6,5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 70 | GWM 71 | GWM 78A |
|---|---|---|---|---|---|
| Labornummer | | | AP2558591 | AP2558592 | AP2558593 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,41 | <0,01 | 1,5 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,9 | 0,11 | 130 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,42 | 0,035 | 2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,1 | 0,65 | 17 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,95 | 0,034 | 5 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,4 | 0,021 | 0,74 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,21 | <0,01 | 1,2 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,081 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,1 | <0,01 | 2,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,066 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,42 | 0,015 | 1,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,26 | <0,01 | 1,9 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,58 | <0,01 | 4,6 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 15 | 0,87 | 170 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 78B | GWM 79A | GWM 80A |
|---|---|---|---|---|---|
| Labornummer | | | AP2558594 | AP2558595 | AP2558596 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,045 | <0,01 | 6,5 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,38 | 0,076 | 24 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,034 | <0,01 | 7,9 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,59 | 0,1 | 96 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,1 | 0,025 | 16 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,061 | <0,01 | 7 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,017 | 2,9 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,1 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,088 | <0,01 | 22 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,1 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,037 | <0,01 | 6,5 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | <0,01 | 4 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,054 | 0,039 | 8,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,4 | 0,26 | 200 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 81A | GWM 82A | GWM 84A |
|---|---|---|---|---|---|
| Labornummer | | | AP2558597 | AP2558598 | AP2558599 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,13 | 0,026 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,064 | 2 | 0,74 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,22 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,31 | 3 | 3,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,011 | 0,37 | 0,52 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,012 | 0,16 | 0,079 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,095 | 0,15 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,41 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | 0,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,1 | 0,17 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,28 | 0,54 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,4 | 6,9 | 6,2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 84B | GWM 85A | GWM 86 |
|---|---|---|---|---|---|
| Labornummer | | | AP2558600 | AP2558601 | AP2558602 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,82 | 0,49 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,031 | 12 | 24 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,024 | 0,66 | 0,77 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,29 | 11 | 7,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,018 | 1,3 | 1,9 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,46 | 0,32 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,37 | 0,5 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,043 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,4 | 1,2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,028 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,1 | 0,23 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,39 | 0,7 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,2 | 1,6 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,38 | 31 | 39 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 88 | GWM 91 | GWM 92A |
|---|---|---|---|---|---|
| Labornummer | | | AP2558603 | AP2558604 | AP2558605 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,17 | 0,056 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 9 | 5,9 | 0,53 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,75 | 0,073 | 0,046 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,2 | 1,7 | 0,64 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,13 | 0,11 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,5 | 0,076 | 0,031 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,67 | 0,075 | 0,038 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 | <0,01 | 0,061 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,098 | 0,024 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,7 | 0,041 | 0,039 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 2,4 | 0,12 | 0,12 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 26 | 8,3 | 1,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | GWM 39 QA/QC | GWM 40 QA/QC | GWM 71 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2558606 | AP2558607 | AP2558608 |
| Probenahmedatum | | | 25.09.2025 | 25.09.2025 | 25.09.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,16 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,034 | 1,8 | 0,11 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,18 | 0,04 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,094 | 3,2 | 0,66 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,36 | 0,034 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,2 | 0,023 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,082 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,3 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,21 | 0,016 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,087 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,22 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,13 | 6,8 | 0,88 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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# E.2 Groundwater Monitoring Wells off-post
# E.2 Grundwassermessstellen off-post

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 16.10.2024 - 17.10.2024 |
| Probeneingangsdatum: | 21.10.2024 |
| Prüfzeitraum: | 21.10.2024 - 05.11.2024 |
| Gesamtseitenzahl: | 4 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 01** |
|---|---|---|---|
| Labornummer | | | AP2470790 |
| Probenahmedatum | | | 16.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,41 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,43 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,79 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,42 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,15 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,68 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,42 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 17 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 02** |
|---|---|---|---|
| Labornummer | | | AP2470791 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,036 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,17 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,014 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,011 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,23 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 03** |
|---|---|---|---|
| Labornummer | | | AP2470792 |
| Probenahmedatum | | | 16.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,099 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,18 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,095 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,067 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,16 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,095 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,2 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 6,4 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 24.10.2024 |
| Prüfzeitraum: | 24.10.2024 - 07.11.2024 |
| Gesamtseitenzahl: | 2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | Offpost 01 - 21-10-2024 | Offpost 02 - 21-10-2024 | Offpost 03 - 21-10-2024 |
|---|---|---|---|---|---|
| Labornummer | | | AP2471932 | AP2471933 | AP2471934 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,32 | <0,01 | 0,14 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,1 | 0,021 | 3,7 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,31 | <0,01 | 0,2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,1 | 0,12 | 2,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,54 | 0,011 | 0,38 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | 0,15 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,098 | <0,01 | 0,088 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,47 | <0,01 | 0,59 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,48 | <0,01 | 0,24 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | <0,01 | 0,12 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | 0,28 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 13 | 0,15 | 8,8 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 28.10.2024 |
| Probeneingangsdatum: | 31.10.2024 |
| Prüfzeitraum: | 31.10.2024 - 11.11.2024 |
| Gesamtseitenzahl: | 3 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 01** |
|---|---|---|---|
| Labornummer | | | AP2473991 |
| Probenahmedatum | | | 28.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,36 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,28 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,1 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,47 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,49 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,13 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 13 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 02** |
|---|---|---|---|
| Labornummer | | | AP2473992 |
| Probenahmedatum | | | 28.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,023 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,031 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,054 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 08.11.2024 |
| Prüfzeitraum: | 08.11.2024 - 17.11.2024 |
| Gesamtseitenzahl: | 2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | Offpost 01 | Offpost 02 | Offpost 03 |
|---|---|---|---|---|---|
| Labornummer | | | AP2475913 | AP2475914 | AP2475915 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | <0,01 | 0,14 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,7 | 0,022 | 3,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,19 | <0,01 | 0,13 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5,5 | 0,033 | 3,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,49 | <0,01 | 0,39 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,22 | <0,01 | 0,16 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,086 | <0,01 | 0,09 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 1,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,37 | <0,01 | 0,23 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,088 | <0,01 | 0,087 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,25 | <0,01 | 0,29 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 10 | 0,055 | 9 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 06.12.2024 |
| Prüfzeitraum: | 06.12.2024 - 19.12.2024 |
| Gesamtseitenzahl: | 4 |

## Untersuchungsergebnis Grundwasser

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 01** |
|---|---|---|---|
| Labornummer | | | AP2483263 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,44 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,45 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,21 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,088 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,44 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,55 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 13 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 02** |
|---|---|---|---|
| Labornummer | | | AP2483264 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,038 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,016 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,27 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 03** |
|---|---|---|---|
| Labornummer | | | AP2483265 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,042 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,093 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,14 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,044 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,044 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,09 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,059 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,15 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 3,9 |

Offpost 01 (Labornummer: AP2483263):
PFT: Werte durch Doppelbestimmung bestätigt.

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 20.01.2025 |
| Prüfzeitraum: | 20.01.2025 - 27.01.2025 |
| Gesamtseitenzahl: | 4 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 01** |
|---|---|---|---|
| Labornummer | | | AP2501837 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,55 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,41 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,57 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,24 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,68 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,14 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 02** |
|---|---|---|---|
| Labornummer | | | AP2501838 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,081 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,093 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **Offpost 03** |
|---|---|---|---|
| Labornummer | | | AP2501839 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,04 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,093 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,97 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,15 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,04 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,049 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,09 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,066 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,16 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 4,5 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

[redacted]

[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 13.02.2025 |
| Prüfzeitraum: | 13.02.2025 - 18.02.2025 |
| Gesamtseitenzahl: | 2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | Offpost 01 | Offpost 02 | Offpost 03 |
|---|---|---|---|---|---|
| Labornummer | | | AP2506673 | AP2506674 | AP2506675 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,59 | <0,01 | 0,048 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,7 | 0,037 | 2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,35 | 0,011 | 0,12 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,6 | 0,15 | 1,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,47 | 0,013 | 0,17 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,2 | <0,01 | 0,047 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,098 | <0,01 | 0,055 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,46 | <0,01 | 0,46 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,63 | <0,01 | 0,12 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | <0,01 | 0,081 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,18 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 17 | 0,21 | 4,4 |

Offpost 01 (Labornummer: AP2506673):
PFHxS und PFOS: Werte durch Doppelbestimmung bestätigt.

[redacted]

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

[redacted]

[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 11.03.2025 |
| Probeneingangsdatum: | 12.03.2025 |
| Prüfzeitraum: | 12.03.2025 - 14.03.2025 |
| Gesamtseitenzahl: | 2 |

[redacted]

[redacted]

[redacted]

[redacted]

## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | Offpost 01 | Offpost 02 | Offpost 03 |
|---|---|---|---|---|---|
| Labornummer | | | AP2512128 | AP2512129 | AP2512130 |
| Probenahmedatum | | | 11.03.2025 | 11.03.2025 | 11.03.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,4 | <0,01 | 0,08 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,2 | <0,01 | 2,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,29 | <0,01 | 0,16 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 5 | 0,022 | 2,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,39 | <0,01 | 0,31 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,18 | <0,01 | 0,13 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,069 | <0,03 | 0,083 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,35 | <0,01 | 0,55 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,34 | <0,01 | 0,12 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,088 | <0,01 | 0,093 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,23 | <0,01 | 0,24 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 12 | 0,022 | 6,3 |

Offpost 02 (Labornummer: AP2512129):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

[redacted]

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

[redacted]

[redacted]

[redacted]



Datum: 29.04.2025

# Prüfbericht Nr.: UST-25-0034818/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0034818 |
| Ihr Auftrag: | vom 15.04.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Samplin |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 17.04.2025 |
| Prüfzeitraum: | 17.04.2025 - 29.04.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0034818-01 | UST-25-0034818-02 | UST-25-0034818-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1 OFF_1 | WP GWM2 OFF_1 | WP GWM3 OFF_1 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,071 | <0,010 | 0,167 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,270 | <0,010 | 0,608 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,404 | 0,017 | 0,931 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,088 | <0,010 | 0,179 |
| Perfluoroctansäure (PFOA) | µg/l | 0,191 | <0,010 | 0,260 |
| Perfluornonansäure (PFNA) | µg/l | 0,294 | <0,010 | 0,185 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,204 | 0,014 | 0,503 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 4,02 | 0,181 | 5,07 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,370 | <0,010 | 0,326 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 3,64 | 0,048 | 4,07 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,239 | <0,010 | 0,499 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 9,79 | 0,260 | 12,8 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
Dieses Dokument wurde von der Gesellschaft im Rahmen ihrer Allgemeinen Geschäftsbedingungen für Dienstleistungen erstellt, die unter www.sgsgroup.de/agb zugänglich sind. Es wird ausdrücklich auf die darin enthaltenen Regelungen zur Haftungsbegrenzung, Freistellung und zum Gerichtsstand hingewiesen.Dieses Dokument ist ein Original. Wenn das Dokument digital übermittelt wird, ist es als Original im Sinne der UCP 600 zu behandeln. Jeder Besitzer dieses Dokuments wird darauf hingewiesen, dass die darin enthaltenen Angaben ausschließlich die im Zeitpunkt der Dienstleistung von der Gesellschaft festgestellten Tatsachen im Rahmen der Vorgaben des Kunden, sofern überhaupt vorhanden, wiedergeben. Die Gesellschaft ist allein dem Kunden gegenüber verantwortlich. Dieses Dokument entbindet die Parteien von Rechtsgeschäften aber nicht von ihren insoweit bestehenden Rechten und Pflichten. Jede nicht genehmigte Änderung, Fälschung oder Verzerrung des Inhalts oder des äußeren Erscheinungsbildes dieses Dokuments ist rechtswidrig. Ein Verstoß kann rechtlich geahndet werden.

Der Prüfbericht wurde am 29.04.2025 um 09:32 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 14.05.2025

# Prüfbericht Nr.: UST-25-0042866/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0042866 |
| Ihr Auftrag: | vom 09.05.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Sampling |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 09.05.2025 |
| Prüfzeitraum: | 09.05.2025 - 14.05.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0042866-01 | UST-25-0042866-02 | UST-25-0042866-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1 OFF_2 | WP GWM2 OFF_2 | WP GWM3 OFF_2 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,071 | <0,010 | 0,226 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,178 | <0,010 | 0,562 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,281 | 0,015 | 0,938 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,056 | <0,010 | 0,187 |
| Perfluoroctansäure (PFOA) | µg/l | 0,136 | <0,010 | 0,419 |
| Perfluornonansäure (PFNA) | µg/l | 0,190 | <0,010 | 0,248 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,165 | 0,013 | 0,627 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 3,24 | 0,172 | 6,00 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,190 | <0,010 | 0,449 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 2,89 | 0,045 | 4,39 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,215 | <0,010 | 0,681 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 7,61 | 0,245 | 14,7 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
Dieses Dokument wurde von der Gesellschaft im Rahmen ihrer Allgemeinen Geschäftsbedingungen für Dienstleistungen erstellt, die unter www.sgsgroup.de/agb zugänglich sind. Es wird ausdrücklich auf die darin enthaltenen Regelungen zur Haftungsbegrenzung, Freistellung und zum Gerichtsstand hingewiesen.Dieses Dokument ist ein Original. Wenn das Dokument digital übermittelt wird, ist es als Original im Sinne der UCP 600 zu behandeln. Jeder Besitzer dieses Dokuments wird darauf hingewiesen, dass die darin enthaltenen Angaben ausschließlich die im Zeitpunkt der Dienstleistung von der Gesellschaft festgestellten Tatsachen im Rahmen der Vorgaben des Kunden, sofern überhaupt vorhanden, wiedergeben. Die Gesellschaft ist allein dem Kunden gegenüber verantwortlich. Dieses Dokument entbindet die Parteien von Rechtsgeschäften aber nicht von ihren insoweit bestehenden Rechten und Pflichten. Jede nicht genehmigte Änderung, Fälschung oder Verzerrung des Inhalts oder des äußeren Erscheinungsbildes dieses Dokuments ist rechtswidrig. Ein Verstoß kann rechtlich geahndet werden.

Der Prüfbericht wurde am 14.05.2025 um 15:12 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 10.06.2025

# Prüfbericht Nr.: UST-25-0051870/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0051870 |
| Ihr Auftrag: | vom 04.06.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Sampling |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 04.06.2025 |
| Prüfzeitraum: | 04.06.2025 - 10.06.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0051870-01 | UST-25-0051870-02 | UST-25-0051870-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1_OFF_3 | WP GWM2_OFF_3 | WP GWM3_OFF_3 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,086 | <0,010 | 0,067 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,176 | <0,010 | 0,148 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,417 | <0,010 | 0,188 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,097 | <0,010 | 0,088 |
| Perfluoroctansäure (PFOA) | µg/l | 0,196 | <0,010 | 0,108 |
| Perfluornonansäure (PFNA) | µg/l | 0,364 | <0,010 | 0,041 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,224 | <0,010 | 0,050 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 3,90 | 0,064 | 0,908 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,453 | <0,010 | 0,094 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 6,00 | 0,018 | 3,16 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,306 | <0,010 | 0,319 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 12,2 | 0,082 | 5,17 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
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Der Prüfbericht wurde am 10.06.2025 um 15:50 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 08.07.2025

# Prüfbericht Nr.: UST-25-0061373/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0061373 |
| Ihr Auftrag: | vom 03.07.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Sampling |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 03.07.2025 |
| Prüfzeitraum: | 03.07.2025 - 08.07.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0061373-01 | UST-25-0061373-02 | UST-25-0061373-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1 OFF_4 | WP GWM2 OFF_4 | WP GWM3 OFF_4 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,112 | <0,010 | 0,126 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,200 | <0,010 | 0,291 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,542 | <0,010 | 0,285 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,122 | <0,010 | 0,163 |
| Perfluoroctansäure (PFOA) | µg/l | 0,243 | <0,010 | 0,188 |
| Perfluornonansäure (PFNA) | µg/l | 0,402 | <0,010 | 0,057 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,254 | <0,010 | 0,084 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 3,81 | 0,025 | 1,60 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,466 | <0,010 | 0,285 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 5,86 | 0,012 | 2,23 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,199 | <0,010 | 0,732 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 12,2 | 0,037 | 6,04 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
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Der Prüfbericht wurde am 08.07.2025 um 16:56 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 08.08.2025

# Prüfbericht Nr.: UST-25-0072398/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0072398 |
| Ihr Auftrag: | vom 01.08.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Sampling |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 01.08.2025 |
| Prüfzeitraum: | 01.08.2025 - 08.08.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0072398-01 | UST-25-0072398-02 | UST-25-0072398-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1 OFF_5 | WP GWM2 OFF_5 | WP GWM3 OFF_5 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,095 | <0,010 | 0,209 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,225 | <0,010 | 0,486 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,401 | 0,018 | 0,898 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,028 | <0,010 | 0,022 |
| Perfluoroctansäure (PFOA) | µg/l | 0,125 | <0,010 | 0,166 |
| Perfluornonansäure (PFNA) | µg/l | 0,392 | <0,010 | 0,208 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,254 | 0,017 | 0,531 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 3,71 | 0,065 | 4,88 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,378 | <0,010 | 0,285 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 4,43 | 0,055 | 4,45 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,847 | <0,010 | 1,80 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 10,9 | 0,155 | 13,9 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
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Der Prüfbericht wurde am 08.08.2025 um 09:48 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 04.09.2025

# Prüfbericht Nr.: UST-25-0081275/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0081275 |
| Ihr Auftrag: | vom 29.08.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #22 - Monthly GWM Sampling |
| Probenahme: | 28.08.2025 |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 29.08.2025 |
| Prüfzeitraum: | 29.08.2025 - 04.09.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0081275-01 | UST-25-0081275-02 | UST-25-0081275-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1_OFF_6 | WP GWM2_OFF_6 | WP GWM3_OFF_6 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,148 | <0,010 | 0,267 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,281 | <0,010 | 0,519 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,658 | 0,015 | 1,28 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,129 | <0,010 | 0,215 |
| Perfluoroctansäure (PFOA) | µg/l | 0,326 | 0,012 | 0,390 |
| Perfluornonansäure (PFNA) | µg/l | 0,485 | <0,010 | 0,230 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,325 | 0,014 | 0,736 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 5,27 | 0,198 | 5,94 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,531 | 0,010 | 0,340 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 6,50 | 0,055 | 4,44 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,350 | <0,010 | 0,552 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 15,0 | 0,304 | 14,9 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
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Der Prüfbericht wurde am 04.09.2025 um 13:54 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

[redacted]

[redacted]



Datum: 01.10.2025

# Prüfbericht Nr.: UST-25-0090750/01-1

DAkkS
Deutsche Akkreditierungsstelle
D-PL-14004-01-01
D-PL-14004-01-02
D-PL-14004-01-03
D-PL-14004-01-04
D-PL-14004-01-05

| | |
|---|---|
| Auftrag-Nr.: | UST-25-0090750 |
| Ihr Auftrag: | vom 26.09.2025 |
| Projekt: | FY23 Non-routine Environmental Sampling, USAG Ansbach (288676): Sampling Request #27 - Monthly GWM Sampling |
| Probenahme: | 25.09.2025 |
| Probenahme durch: | Auftraggeber |
| Eingangsdatum: | 26.09.2025 |
| Prüfzeitraum: | 26.09.2025 - 01.10.2025 |
| Probenart: | Grundwasser |

[redacted]

## Untersuchungsergebnisse

| Probe Nr.: | | UST-25-0090750-01 | UST-25-0090750-02 | UST-25-0090750-03 |
|---|---|---|---|---|
| Bezeichnung: | | WP GWM1_OFF_7 | WP GWM2_OFF_7 | WP GWM3_OFF_7 |

### Laboruntersuchungen

**PFAS**

| | | | | |
|---|---|---|---|---|
| Perfluorbutansäure (PFBA) | µg/l | 0,193 | <0,010 | 0,272 |
| Perfluorpentansäure (PFPeA) | µg/l | 0,454 | <0,010 | 0,537 |
| Perfluorhexansäure (PFHxA) | µg/l | 0,834 | 0,013 | 1,23 |
| Perfluorheptansäure (PFHpA) | µg/l | 0,219 | <0,010 | 0,280 |
| Perfluoroctansäure (PFOA) | µg/l | 0,394 | <0,010 | 0,372 |
| Perfluornonansäure (PFNA) | µg/l | 0,563 | <0,010 | 0,246 |
| Perfluordecansäure (PFDA) | µg/l | <0,010 | <0,010 | <0,010 |
| Perfluorbutansulfonsäure (PFBS) | µg/l | 0,356 | 0,017 | 0,647 |
| Perfluorhexansulfonsäure (PFHxS) | µg/l | 7,11 | 0,180 | 6,53 |
| Perfluorheptansulfonsäure (PFHpS) | µg/l | 0,692 | <0,010 | 0,334 |
| Perfluoroctansulfonsäure (PFOS) | µg/l | 7,81 | 0,067 | 4,23 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | µg/l | 0,450 | <0,010 | 0,495 |
| Perfluoroctansulfonamid (PFOSA) | µg/l | <0,010 | <0,010 | <0,010 |
| Summe PFAS | µg/l | 19,1 | 0,277 | 15,2 |

Sofern nicht anders dargestellt wurden die Untersuchungen am eigenen Standort durchgeführt. Die Prüfergebnisse beziehen sich ausschließlich auf die untersuchten Prüfgegenstände und den Zeitpunkt der Durchführung der Prüfung im Rahmen der Prüfvorgaben. Die Veröffentlichung und Vervielfältigung unserer Prüfberichte und Gutachten zu Werbezwecken sowie deren auszugsweise Verwendung in sonstigen Fällen bedürfen unserer schriftlichen Genehmigung.
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Der Prüfbericht wurde am 01.10.2025 um 16:53 Uhr durch [redacted] elektronisch freigegeben und ist ohne Unterschrift gültig.

| **Angewandte Methoden** | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03 |

| Angewandte Methoden | |
|---|---|
| **Parameter** | **Norm** |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03 |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03 |
| 1H,1H,2H,2H-Perfluoroctansulfonsäure (6:2 FTS) (H4PFOS) | DIN 38407-F42:2011-03 |
| Perfluoroctansulfonamid (PFOSA) | DIN 38407-F42:2011-03 |
| Summe PFAS | DIN 38407-F42:2011-03 |

[redacted]

# E.3 Treatment Units

# E.3 Reinigungsanlagen

[redacted]

[redacted]

## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 17.10.2024 - 18.10.2024 |
| Probeneingangsdatum: | 21.10.2024 |
| Prüfzeitraum: | 21.10.2024 - 05.11.2024 |
| Gesamtseitenzahl: | 7 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

[redacted]

[redacted]

[redacted]

[redacted]

## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - ROH1 |
|---|---|---|---|
| Labornummer | | | AP2470793 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 497 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 507 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 80 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 42 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 12 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,021 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,54 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,032 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,017 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,025 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,031 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - MID |
|---|---|---|---|
| Labornummer | | | AP2470794 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - REIN |
|---|---|---|---|
| Labornummer | | | AP2470795 |
| Probenahmedatum | | | 18.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3- ROH1 |
|---|---|---|---|
| Labornummer | | | AP2470796 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 590 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 573 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 86 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 31 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 21 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,72 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 17 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 1,2 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 17 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 2,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,89 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,47 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 3,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,57 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,4 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 46 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3- MID |
|---|---|---|---|
| Labornummer | | | AP2470797 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3- REIN |
|---|---|---|---|
| Labornummer | | | AP2470798 |
| Probenahmedatum | | | 17.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | keine Angaben |
| Probeneingangsdatum: | 25.10.2024 |
| Prüfzeitraum: | 25.10.2024 - 07.11.2024 |
| Gesamtseitenzahl: | 6 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - ROH_2024-10-22 |
|---|---|---|---|
| Labornummer | | | AP2472505 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 519 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 469 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 88 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 45 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 12 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,024 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,56 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,035 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,093 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,016 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,03 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,011 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,029 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - MID_2024-10-22 | TS2 - REIN_2024-10-22 |
|---|---|---|---|---|
| Labornummer | | | AP2472506 | AP2472507 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,028 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | 0,028 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3- ROH_2024-10-22 |
|---|---|---|---|
| Labornummer | | | AP2472508 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 522 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 496 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 76 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 30 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 21 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 13 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,66 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 12 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,7 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,83 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 34 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID_2024-10-22 | TS3-REIN_2024-10-22 | TS3-REIN_2024-10-22 QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2472509 | AP2472510 | AP2472511 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2- REIN_2024-10-22 QA/QC |
|---|---|---|---|
| Labornummer | | | AP2472512 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

TS2 - ROH_2024-10-22 (Labornummer: AP2472505):
DOC: Probe wurde im Labor nachträglich filtriert.

TS3- ROH_2024-10-22 (Labornummer: AP2472508):
DOC: Probe wurde im Labor nachträglich filtriert.

[redacted]

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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# PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 29.10.2024 |
| Probeneingangsdatum: | 31.10.2024 |
| Prüfzeitraum: | 31.10.2024 - 13.11.2024 |
| Gesamtseitenzahl: | 6 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2474000 |
| Probenahmedatum | | | 29.10.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 482 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 501 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 92 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 46 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,8 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,61 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,093 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,018 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,031 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,011 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,031 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,12 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID | TS2-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2474001 | AP2474002 |
| Probenahmedatum | | | 29.10.2024 | 29.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2474003 |
| Probenahmedatum | | | 29.10.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 406 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 463 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 73 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 21 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,55 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 10 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,74 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,4 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,51 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,3 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,66 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,32 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,91 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 27 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2474004 | AP2474005 |
| Probenahmedatum | | | 29.10.2024 | 29.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,078 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,078 | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC | TS2-REIN QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2474006 | AP2474007 |
| Probenahmedatum | | | 29.10.2024 | 29.10.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 05.11.2024 |
| Probeneingangsdatum: | 08.11.2024 |
| Prüfzeitraum: | 08.11.2024 - 18.11.2024 |
| Gesamtseitenzahl: | 6 |

## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **TS2-ROH** |
|---|---|---|---|
| Labornummer | | | AP2475944 |
| Probenahmedatum | | | 05.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 478 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 531 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2475944 |
| Probenahmedatum | | | 05.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 92 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 45 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,6 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,019 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,015 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,21 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,092 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,017 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,021 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID | TS2-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2475945 | AP2475946 |
| Probenahmedatum | | | 05.11.2024 | 05.11.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2475947 |
| Probenahmedatum | | | 05.11.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 418 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 489 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 73 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 22 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,5 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,23 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,24 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,58 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2475948 | AP2475949 |
| Probenahmedatum | | | 05.11.2024 | 05.11.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,15 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,15 | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC | TS2-REIN QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2475950 | AP2475951 |
| Probenahmedatum | | | 05.11.2024 | 05.11.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar

TS2-ROH (Labornummer: AP2475944):
Eingangskontrolle: Der Analysenauftrag wurde erst am 3. Tag nach Probeneingang geliefert.
DOC: Probe wurde im Labor nachträglich filtriert.

TS3-ROH (Labornummer: AP2475947):
DOC: Probe wurde im Labor nachträglich filtriert.

[redacted]

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 13.11.2024 |
| Probeneingangsdatum: | 14.11.2024 |
| Prüfzeitraum: | 14.11.2024 - 25.11.2024 |
| Gesamtseitenzahl: | 5 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2477359 |
| Probenahmedatum | | | 13.11.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 424 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 468 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 70 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 22 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,51 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,67 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,45 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,8 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,6 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,78 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 14 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2477360 |
| Probenahmedatum | | | 13.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,031 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,3 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2477361 |
| Probenahmedatum | | | 13.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2477362 |
| Probenahmedatum | | | 13.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

TS3-ROH (Labornummer: AP2477359):
PFOS und PFHxS: Werte durch Doppelbestimmung bestätigt.

[redacted]

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 20.11.2024 |
| Probeneingangsdatum: | 25.11.2024 |
| Prüfzeitraum: | 25.11.2024 - 09.12.2024 |
| Gesamtseitenzahl: | 9 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2480139 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 2,4 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | <200 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 171 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 16 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 5,3 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,19 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,014 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,033 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,044 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,38 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID |
|---|---|---|---|
| Labornummer | | | AP2480140 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN |
|---|---|---|---|
| Labornummer | | | AP2480141 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2480142 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 458 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 470 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 67 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 23 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,5 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,39 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,68 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,44 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,6 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,77 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 23 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2480143 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,31 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,061 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,37 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2480144 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2480145 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2480146 |
| Probenahmedatum | | | 20.11.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 29.11.2024 |
| Probeneingangsdatum: | 02.12.2024 |
| Prüfzeitraum: | 02.12.2024 - 09.12.2024 |
| Gesamtseitenzahl: | 3 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2482077 |
| Probenahmedatum | | | 29.11.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 413 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 458 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 68 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 23 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,45 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,54 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,2 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,46 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,24 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,7 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,69 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN | TS3-REIN QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2482078 | AP2482079 | AP2482080 |
| Probenahmedatum | | | 29.11.2024 | 29.11.2024 | 29.11.2024 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,13 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,4 | n.n. | n.n. |

n.n. = nicht nachweisbar

TS3-ROH (Labornummer: AP2482077):
DOC: Probe wurde im Labor nachträglich filtriert.
PFHxS, PFOS: Werte wurden durch Doppelbestimmung bestätigt.

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 03.12.2024 |
| Probeneingangsdatum: | 04.12.2024 |
| Prüfzeitraum: | 04.12.2024 - 09.12.2024 |
| Gesamtseitenzahl: | 6 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2482752 |
| Probenahmedatum | | | 03.12.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 509 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 511 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 84 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 43 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,6 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,019 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,49 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,024 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,22 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,086 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID | TS2-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2482753 | AP2482754 |
| Probenahmedatum | | | 03.12.2024 | 03.12.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2482755 |
| Probenahmedatum | | | 03.12.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,5 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 461 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 469 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 66 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 23 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,54 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,47 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,75 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 23 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2482756 | AP2482757 |
| Probenahmedatum | | | 03.12.2024 | 03.12.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,3 | 0,018 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,19 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,49 | 0,018 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC | TS2-REIN QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2482758 | AP2482759 |
| Probenahmedatum | | | 03.12.2024 | 03.12.2024 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,019 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,019 | n.n. |

n.n. = nicht nachweisbar

TS2-ROH (Labornummer: AP2482752):
DOC: Probe wurde im Labor nachträglich filtriert.

TS3-ROH (Labornummer: AP2482755):
DOC: Probe wurde im Labor nachträglich filtriert.
PFHxS, PFOS: Werte wurden durch Doppelbestimmung bestätigt.

[redacted]

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 13.12.2024 |
| Probeneingangsdatum: | 16.12.2024 |
| Prüfzeitraum: | 16.12.2024 - 08.01.2025 |
| Gesamtseitenzahl: | 6 |

## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | **TS3-ROH** |
|---|---|---|---|
| Labornummer | | | AP2485751 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 489 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 508 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2485751 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 65 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,5 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,55 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 8,6 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,64 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,58 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,28 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,71 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 25 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2485752 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,27 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,53 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2485753 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,065 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,065 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2485754 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,064 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,064 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID-III |
|---|---|---|---|
| Labornummer | | | AP2485755 |
| Probenahmedatum | | | 13.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,24 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,24 |

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 17.12.2024 |
| Probeneingangsdatum: | 18.12.2024 |
| Prüfzeitraum: | 18.12.2024 - 08.01.2025 |
| Gesamtseitenzahl: | 10 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2486251 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 483 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 495 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 84 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 44 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,028 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,56 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,027 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,23 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,082 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,016 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,099 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,1 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID |
|---|---|---|---|
| Labornummer | | | AP2486252 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN |
|---|---|---|---|
| Labornummer | | | AP2486253 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2486254 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 427 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 445 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 66 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 23 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,51 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,63 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,3 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,56 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,73 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 24 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2486255 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,33 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,61 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2486256 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,088 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,088 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID-III |
|---|---|---|---|
| Labornummer | | | AP2486259 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,25 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2486257 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,088 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,088 |

Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2486258 |
| Probenahmedatum | | | 17.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten.
Bei der Bewertung der Konformität mit den Regelwerken wird die MU nicht berücksichtigt. | Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 23.12.2024 |
| Probeneingangsdatum: | 08.01.2025 |
| Prüfzeitraum: | 08.01.2025 - 16.01.2025 |
| Gesamtseitenzahl: | 5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2500503 |
| Probenahmedatum | | | 23.12.2024 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 428 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 447 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 63 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,6 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,67 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,33 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,72 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 24 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2500504 |
| Probenahmedatum | | | 23.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,016 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,65 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2500505 |
| Probenahmedatum | | | 23.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,12 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,12 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID-III |
|---|---|---|---|
| Labornummer | | | AP2500507 |
| Probenahmedatum | | | 23.12.2024 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,25 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 02.01.2025 |
| Probeneingangsdatum: | 08.01.2025 |
| Prüfzeitraum: | 08.01.2025 - 16.01.2025 |
| Gesamtseitenzahl: | 10 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2500520 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 425 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 490 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 83 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 44 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,8 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,7 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,015 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,43 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,029 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,24 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,076 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,015 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,023 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,029 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,088 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,95 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID |
|---|---|---|---|
| Labornummer | | | AP2500521 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN |
|---|---|---|---|
| Labornummer | | | AP2500522 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2500523 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,6 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 378 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 445 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 64 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 23 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,49 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,69 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 9,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,36 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,69 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 24 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2500524 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,026 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,78 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2500525 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,18 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,18 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID-III |
|---|---|---|---|
| Labornummer | | | AP2500528 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,25 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2500526 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,18 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,18 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN QA/QC |
|---|---|---|---|
| Labornummer | | | AP2500527 |
| Probenahmedatum | | | 02.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Herr Köller / Auftraggeber |
| Probenahmedatum: | 13.01.2025 |
| Probeneingangsdatum: | 14.01.2025 |
| Prüfzeitraum: | 14.01.2025 - 20.01.2025 |
| Gesamtseitenzahl: | 6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH |
|---|---|---|---|
| Labornummer | | | AP2500873 |
| Probenahmedatum | | | 13.01.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 3,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 339 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 482 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 62 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 36 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 13 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 7,7 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 3,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,27 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,03 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,15 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,054 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,018 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,02 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,068 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,62 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID | TS2-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2500874 | AP2500875 |
| Probenahmedatum | | | 13.01.2025 | 13.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2500876 |
| Probenahmedatum | | | 13.01.2025 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 437 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 447 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 59 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,67 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 15 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,98 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 10 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,6 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,64 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,37 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,64 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,51 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 34 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN | TS3-REIN-QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2500877 | AP2500878 | AP2500879 |
| Probenahmedatum | | | 13.01.2025 | 13.01.2025 | 13.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,079 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,34 | 0,34 | 0,34 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,83 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1,2 | 0,34 | 0,34 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN-QA/QC | TS3-MID-III |
|---|---|---|---|---|
| Labornummer | | | AP2500880 | AP2500881 |
| Probenahmedatum | | | 13.01.2025 | 13.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,35 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,029 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | 0,38 |

n.n. = nicht nachweisbar

TS2-ROH (Labornummer: AP2500873):
DOC: Probe wurde im Labor nachträglich filtriert.

TS3-ROH (Labornummer: AP2500876):
DOC: Probe wurde im Labor nachträglich filtriert.

Analytik Institut Rietzler GmbH, Fürth, den 20.01.2025

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Herr Köller / Auftraggeber |
| Probenahmedatum: | 27.01.2025 |
| Probeneingangsdatum: | 28.01.2025 |
| Prüfzeitraum: | 28.01.2025 - 08.02.2025 |
| Gesamtseitenzahl: | 5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-ROH | TS3-ROH |
|---|---|---|---|---|
| Labornummer | | | AP2503316 | AP2503319 |
| Probenahmedatum | | | 27.01.2025 | 27.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,018 | 0,45 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,49 | 7 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,021 | 0,56 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,25 | 8,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,08 | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,014 | 0,51 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,023 | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,9 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,01 | 0,53 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,29 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,089 | 0,72 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1 | 22 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,4 | 5,6 |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 83 | 65 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 41 | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 | 24 |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,8 | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,7 | 1,1 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 382 | 412 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 470 | 484 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-MID | TS2-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2503317 | AP2503318 |
| Probenahmedatum | | | 27.01.2025 | 27.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN-QA/QC | TS3-REIN |
|---|---|---|---|---|---|
| Labornummer | | | AP2503320 | AP2503322 | AP2503321 |
| Probenahmedatum | | | 27.01.2025 | 27.01.2025 | 27.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2-REIN-QA/QC | TS3-MID-III |
|---|---|---|---|---|
| Labornummer | | | AP2503323 | AP2503324 |
| Probenahmedatum | | | 27.01.2025 | 27.01.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | [redacted] |
| Probenahmedatum: | 10.02.2025 |
| Probeneingangsdatum: | 11.02.2025 |
| Prüfzeitraum: | 11.02.2025 - 20.02.2025 |
| Gesamtseitenzahl: | 6 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2505845 |
| Probenahmedatum | | | 10.02.25-14:12h |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,9 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 9,7 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 797 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 245 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,7 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 468 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 509 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 60 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 26 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2505845 |
| Probenahmedatum | | | 10.02.25-14:12h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,49 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,53 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,4 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,56 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,33 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,78 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 23 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | AP2505846 | AP2505848 |
| Probenahmedatum | | | 10.02.25-14:07h | 10.02.25-13:56h |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 9,8 | 10,3 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 800 | 807 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 270 | 256 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,8 | 8,6 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,092 | <0,02 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,092 | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID III | TS3-REIN-QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2505847 | AP2505849 |
| Probenahmedatum | | | 10.02.25-14:02h | 10.02.25-13:56h |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,0 | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 800 | - |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 266 | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,8 | - |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,02 | <0,02 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar

Der Bericht ersetzt Prüfbericht AB2501558 vom 14.02.2025.
Änderung zu Labornr. AP2505845: Die Flaschen wurden bei der Probenahme mit der Probe TS2-ROH vertauscht. Dieser Prüfbericht weist die richtigen Ergebnisse aus.

TS3-MID III (Labornummer: AP2505847):
TS3-REIN (Labornummer: AP2505848):
TS3-REIN-QA/QC (Labornummer: AP2505849):
PFBA: Aufgrund von Matrixeffekten musste die Bestimmungsgrenze erhöht werden.

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | [redacted] |
| Probenahmedatum: | 25.02.2025 |
| Probeneingangsdatum: | 27.02.2025 |
| Prüfzeitraum: | 27.02.2025 - 11.03.2025 |
| Gesamtseitenzahl: | 6 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2509405 |
| Probenahmedatum | | | 25.02.25-14:20h |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 9,6 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 801 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 175 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,6 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 419 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 424 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 64 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,7 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,4 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2509405 |
| Probenahmedatum | | | 25.02.25-14:20h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,43 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,68 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,1 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,49 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,33 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,8 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 22 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-MID III |
|---|---|---|---|---|
| Labornummer | | | AP2509406 | AP2509407 |
| Probenahmedatum | | | 25.02.25-14:10h | 25.02.25-14:00h |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 9,7 | 9,7 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 806 | 810 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 216 | 204 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,5 | 8,5 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,2 | 0,026 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,054 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,25 | 0,026 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN | TS3-REIN-QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2509408 | AP2509409 |
| Probenahmedatum | | | 25.02.25-13:50h | 25.02.25-13:20h |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,4 | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 802 | - |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 205 | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,5 | - |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 10.03.2025 |
| Probeneingangsdatum: | 11.03.2025 |
| Prüfzeitraum: | 11.03.2025 - 14.03.2025 |
| Gesamtseitenzahl: | 5 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2511721 |
| Probenahmedatum | | | 10.03.25-11:31h |
| Probenahmeort | | | Katterbach Kaserne, TS13 |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,3 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,3 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 288 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 32 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | - |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 422 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 453 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 66 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,5 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2511721 |
| Probenahmedatum | | | 10.03.25-11:31h |
| Probenahmeort | | | Katterbach Kaserne, TS13 |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 7,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,71 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 8,4 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,5 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,54 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,55 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,87 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 23 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-MID III | TS3-REIN |
|---|---|---|---|---|---|
| Labornummer | | | AP2511722 | AP2511723 | AP2511724 |
| Probenahmedatum | | | 10.03.25-11:34h | 10.03.25-11:37h | 10.03.25-11:42h |
| Probenahmeort | | | Katterbach Kaserne, TS13 | Katterbach Kaserne, TS13 | Katterbach Kaserne, TS13 |
| Parameter | Methode | Einheit | | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 | 6,8 | 6,6 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,2 | 10,8 | 10,5 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 269 | 259 | 256 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 30 | 27 | 31 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | - | - | - |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 | 0,088 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,14 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,41 | 0,088 | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN-QA/QC |
|---|---|---|---|
| Labornummer | | | AP2511725 |
| Probenahmedatum | | | 10.03.25-11:42h |
| Probenahmeort | | | Katterbach Kaserne, TS13 |
| **Parameter** | **Methode** | **Einheit** | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

Der Bericht ersetzt Prüfbericht AB2502946 vom 13.03.2025.
Das Probenahmedatum wurde korrigiert.

[redacted]

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Frau Engelhard / AIR |
| Probenahmedatum: | 24.03.2025 |
| Probeneingangsdatum: | 24.03.2025 |
| Prüfzeitraum: | 24.03.2025 - 08.04.2025 |
| Gesamtseitenzahl: | 8 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2515197 |
| Probenahmedatum | | | 24.03.25-12:09h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,1 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 817 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 163 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 8,1 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,4 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 383 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 478 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 67 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2515197 |
| Probenahmedatum | | | 24.03.25-12:09h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,37 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,1 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,59 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,3 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,14 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,23 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,8 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 20 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2515198 |
| Probenahmedatum | | | 24.03.25-12:00h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,1 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 816 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 247 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 7,8 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,014 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,29 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,58 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID III |
|---|---|---|---|
| Labornummer | | | AP2515199 |
| Probenahmedatum | | | 24.03.25-11:50h |
| Probenahmeort | | | Katterbach Kaserne |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,1 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 817 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 242 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 7,8 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,17 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,17 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2515200 |
| Probenahmedatum | | | 24.03.25-11:40h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,0 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 10,1 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 815 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 235 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 7,8 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,025 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,025 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN-QA/QC |
|---|---|---|---|
| Labornummer | | | AP2515201 |
| Probenahmedatum | | | 24.03.25-11:00h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | - |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | - |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 10.04.2025 |
| Probeneingangsdatum: | 11.04.2025 |
| Prüfzeitraum: | 11.04.2025 - 24.04.2025 |
| Gesamtseitenzahl: | 4 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2519958 |
| Probenahmedatum | | | 10.04.25-13:57h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 453 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 462 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 68 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,41 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 6,5 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,62 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,4 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,27 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 2,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,35 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,8 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 21 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-MID III |
|---|---|---|---|---|
| Labornummer | | | AP2519959 | AP2519960 |
| Probenahmedatum | | | 10.04.25-13:52h | 10.04.25-13:47h |
| Probenahmeort | | | Katterbach Kaserne | Katterbach Kaserne |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,042 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,28 | 0,22 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,41 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,73 | 0,22 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN | TS3-REIN-QA/QC |
|---|---|---|---|---|
| Labornummer | | | AP2519961 | AP2519963 |
| Probenahmedatum | | | 10.04.25-13:42h | 10.04.25-13:42h |
| Probenahmeort | | | Katterbach Kaserne | Katterbach Kaserne |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,083 | 0,083 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,083 | 0,083 |

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 08.05.2025 |
| Probeneingangsdatum: | 09.05.2025 |
| Prüfzeitraum: | 09.05.2025 - 16.05.2025 |
| Gesamtseitenzahl: | 7 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - ROH | TS3 - ROH |
|---|---|---|---|---|
| Labornummer | | | AP2526043 | AP2526046 |
| Probenahmedatum | | | 08.05.2025 | 08.05.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,4 | 6,7 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 13,0 | 13,4 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 389 | 512 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 4 | 22 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 6,5 | 6,5 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 477 | 473 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 462 | 424 |
| **Anionen** | | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 80 | 69 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 47 | 29 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 11 | 26 |
| **Org. Summenparameter** | | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 | 1,3 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 2 | 1,4 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - ROH | TS3 - ROH |
|---|---|---|---|---|
| Labornummer | | | AP2526043 | AP2526046 |
| Probenahmedatum | | | 08.05.2025 | 08.05.2025 |
| Probenahmeort | | | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,013 | 0,42 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,51 | 5,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,023 | 0,6 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,23 | 7,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,089 | 1,3 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,016 | 0,46 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | 0,22 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 1,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | 0,29 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,032 | 0,33 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,1 | 0,74 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1 | 19 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - MID | TS2 - REIN | TS3 - MID |
|---|---|---|---|---|---|
| Labornummer | | | AP2526044 | AP2526045 | AP2526047 |
| Probenahmedatum | | | 08.05.2025 | 08.05.2025 | 08.05.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 7,4 | 7,4 | 6,6 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 13,1 | 13,3 | 125 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 405 | 406 | 400 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | -16 | -22 | 13 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 2,4 | 1,8 | 4,5 |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | 0,023 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. | 0,023 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3 - REIN | TS3 - REIN-QA/QC | TS2 - REIN QA/QC |
|---|---|---|---|---|---|
| Labornummer | | | AP2526048 | AP2526049 | AP2526050 |
| Probenahmedatum | | | 08.05.2025 | 08.05.2025 | 08.05.2025 |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| **Parameter** | **Methode** | **Einheit** | | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,4 | - | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 12,2 | - | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 339 | - | - |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 25 | - | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 3,7 | - | - |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3 - MID - II |
|---|---|---|---|
| Labornummer | | | AP2526051 |
| Probenahmedatum | | | 08.05.2025 |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,5 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 12,2 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 353 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 17 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 3,8 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne Ansbach |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 02.06.2025 |
| Probeneingangsdatum: | 03.06.2025 |
| Prüfzeitraum: | 03.06.2025 - 18.06.2025 |
| Gesamtseitenzahl: | 8 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2532250 |
| Probenahmedatum | | | 02.06.25-10:45h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,7 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 14,9 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 361 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 24 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 6,5 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 411 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 516 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 65 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 25 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 1,3 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2532250 |
| Probenahmedatum | | | 02.06.25-10:45h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,4 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 5,9 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,57 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 7,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,52 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,25 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,6 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,54 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,31 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,69 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 19 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID |
|---|---|---|---|
| Labornummer | | | AP2532251 |
| Probenahmedatum | | | 02.06.25-10:49h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,7 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 13,7 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 316 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 18 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 4,7 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,014 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,014 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID II |
|---|---|---|---|
| Labornummer | | | AP2532252 |
| Probenahmedatum | | | 02.06.25-10:54h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,6 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 13,4 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 297 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 22 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 4,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN |
|---|---|---|---|
| Labornummer | | | AP2532253 |
| Probenahmedatum | | | 02.06.25-10:58h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | 6,5 |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 13,4 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 300 |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | 26 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 4,3 |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-Rein QA/QC |
|---|---|---|---|
| Labornummer | | | AP2532254 |
| Probenahmedatum | | | 02.06.25-10:59h |
| Probenahmeort | | | Katterbach Kaserne |
| Parameter | Methode | Einheit | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | - |
| Redoxpotential (v. Ort) | DIN 38404-C6:1984-05* | mV | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | - |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 01.07.2025 |
| Probeneingangsdatum: | 01.07.2025 |
| Prüfzeitraum: | 01.07.2025 - 10.07.2025 |
| Gesamtseitenzahl: | 9 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS2 - ROH |
|---|---|---|---|---|
| Labornummer | | | | AP2538784 |
| Probenahmedatum | | | | 01.07.2025 |
| Probenahmeort | | | | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 7,1 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 15,9 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 324 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05* | mV | 5 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 6,1 |
| Trockenrückstand | | DIN 38409-H1:1987-01* | mg/l | 385 |
| Säurekapazität Ks4,3 | | DIN 38409-H7:2005-12* | mmol/l | 5,2 |
| Gesamtgehalt gelöster Feststoffe (TDS) | | DIN EN 15216:2008-01* | mg/l | 338 |
| **Anionen** | | | | |
| Chlorid | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 63 |
| Sulfat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 41 |
| Nitrat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 9,5 |
| **Org. Summenparameter** | | | | |
| TOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,9 |
| DOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS2 - ROH |
|---|---|---|---|
| Labornummer | | | AP2538784 |
| Probenahmedatum | | | 01.07.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,015 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,57 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,025 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 0,21 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 0,072 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,017 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,022 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,012 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,017 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,079 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 1 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS2 - MID | TS2 - REIN |
|---|---|---|---|---|---|
| Labornummer | | | | AP2538785 | AP2538786 |
| Probenahmedatum | | | | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | | Katterbach | Katterbach |
| Parameter | | Methode | Einheit | | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 7,2 | 7,2 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 16,7 | 17,6 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 340 | 354 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05* | mV | -1 | -1 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 8,7 | 1,9 |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | 0,011 | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | 0,011 | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3 - ROH |
|---|---|---|---|---|
| Labornummer | | | | AP2538787 |
| Probenahmedatum | | | | 01.07.2025 |
| Probenahmeort | | | | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,7 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 18,5 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 329 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05* | mV | 7 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 6,3 |
| Trockenrückstand | | DIN 38409-H1:1987-01* | mg/l | 375 |
| Säurekapazität Ks4,3 | | DIN 38409-H7:2005-12* | mmol/l | 5,8 |
| Gesamtgehalt gelöster Feststoffe (TDS) | | DIN EN 15216:2008-01* | mg/l | 352 |
| **Anionen** | | | | |
| Chlorid | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 64 |
| Sulfat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 28 |
| Nitrat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 25 |
| **Org. Summenparameter** | | | | |
| TOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,9 |
| DOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,9 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3 - ROH |
|---|---|---|---|
| Labornummer | | | AP2538787 |
| Probenahmedatum | | | 01.07.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,4 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,47 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,9 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,5 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,22 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,51 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,19 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,62 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3 - MID | TS3 - REIN | TS3 - REIN-QA/QC |
|---|---|---|---|---|---|---|
| Labornummer | | | | AP2538788 | AP2538789 | AP2538790 |
| Probenahmedatum | | | | 01.07.2025 | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | | Katterbach | Katterbach | Katterbach |
| Parameter | | Methode | Einheit | | | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,7 | 6,4 | - |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 16,1 | 15,2 | - |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 302 | 292 | - |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05* | mV | 9 | 25 | - |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,9 | 4,5 | - |
| **PFT** | | | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS2 - REIN QA/QC | TS3 - MID - II |
|---|---|---|---|---|---|
| Labornummer | | | | AP2538791 | AP2538792 |
| Probenahmedatum | | | | 01.07.2025 | 01.07.2025 |
| Probenahmeort | | | | Katterbach | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | - | 6,5 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | - | 15,3 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | - | 293 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05* | mV | - | 17 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | - | 4,7 |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | n.n. | n.n. |

n.n. = nicht nachweisbar
AG: Analytik durch Auftraggeber

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TS3 - ROH (Labornummer: AP2538787):
PFAS: Werte durch verdünnte Messung bestätigt.

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Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne Ansbach |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 31.07.2025 |
| Probeneingangsdatum: | 01.08.2025 |
| Prüfzeitraum: | 01.08.2025 - 13.08.2025 |
| Gesamtseitenzahl: | 8 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-ROH |
|---|---|---|---|---|
| Labornummer | | | | AP2546099 |
| Probenahmedatum | | | | 31.07.25-10:42h |
| Probenahmeort | | | | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 6,0 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,8 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 15,3 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 298 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05 Ber 2018-12* | mV | -5 |
| Säurekapazität Ks4,3 | | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Trockenrückstand | | DIN 38409-H1:1987-01* | mg/l | 504 |
| Gesamtgehalt gelöster Feststoffe (TDS) | | DIN EN 15216:2008-01* | mg/l | 469 |
| **Anionen** | | | | |
| Nitrat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 25 |
| Sulfat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 27 |
| Chlorid | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 60 |
| **Org. Summenparameter** | | | | |
| DOC | | DIN EN 1484 (H3):2019-04* | mg/l | 0,72 |
| TOC | | DIN EN 1484 (H3):2019-04* | mg/l | 2 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2546099 |
| Probenahmedatum | | | 31.07.25-10:42h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,37 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,8 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,2 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,48 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,21 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,3 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,41 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,23 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,62 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 16 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-MID |
|---|---|---|---|---|
| Labornummer | | | | AP2546100 |
| Probenahmedatum | | | | 31.07.25-10:46h |
| Probenahmeort | | | | Katterbach |
| Parameter | | Methode | Einheit | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,7 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 14,7 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 285 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05 Ber 2018-12* | mV | -9 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 5,0 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | 0,047 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | 0,047 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-MID II |
|---|---|---|---|---|
| Labornummer | | | | AP2546101 |
| Probenahmedatum | | | | 31.07.25-10:50h |
| Probenahmeort | | | | Katterbach |
| Parameter | | Methode | Einheit | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,6 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,5 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 14,4 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 273 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05 Ber 2018-12* | mV | 2 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | | AP2546102 |
| Probenahmedatum | | | | 31.07.25-10:54h |
| Probenahmeort | | | | Katterbach |
| Parameter | | Methode | Einheit | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,4 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,4 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 14,3 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 271 |
| Redoxpotential (v. Ort) | AG | DIN 38404-C6:1984-05 Ber 2018-12* | mV | 12 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN-QA/QC |
|---|---|---|---|
| Labornummer | | | AP2546103 |
| Probenahmedatum | | | 31.07.25-10:54h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN Blank |
|---|---|---|---|
| Labornummer | | | AP2546226 |
| Probenahmedatum | | | 31.07.2025 |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar
AG: Analytik durch Auftraggeber

[redacted]

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne Ansbach |
| Probenehmer: | Auftraggeber |
| Probenahmedatum: | 28.08.2025 |
| Probeneingangsdatum: | 29.08.2025 |
| Prüfzeitraum: | 29.08.2025 - 18.09.2025 |
| Gesamtseitenzahl: | 7 |

### Untersuchungsergebnis Grundwasser

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-ROH |
|---|---|---|---|---|
| Labornummer | | | | AP2552177 |
| Probenahmedatum | | | | 28.08.25-11:00h |
| Probenahmeort | | | | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 5,4 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,8 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 15,8 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 1.010 |
| Redoxpotential (v. Ort) | AG | Ablesung aus Betriebstechnik | mV | -10 |
| Säurekapazität Ks4,3 | | DIN 38409-H7:2005-12* | mmol/l | 5,7 |
| Trockenrückstand | | DIN 38409-H1:1987-01* | mg/l | 420 |
| Gesamtgehalt gelöster Feststoffe (TDS) | | DIN EN 15216:2008-01* | mg/l | 399 |
| **Anionen** | | | | |
| Nitrat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| Sulfat | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 24 |
| Chlorid | | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 56 |
| **Org. Summenparameter** | | | | |
| DOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,2 |
| TOC | | DIN EN 1484 (H3):2019-04* | mg/l | 1,1 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2552177 |
| Probenahmedatum | | | 28.08.25-11:00h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,37 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 4,2 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,46 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6,6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,44 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,19 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 0,95 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,38 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,2 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,58 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 15 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-MID |
|---|---|---|---|---|
| Labornummer | | | | AP2552178 |
| Probenahmedatum | | | | 28.08.25-11:05h |
| Probenahmeort | | | | Katterbach |
| **Parameter** | | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,7 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 15,0 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 864 |
| Redoxpotential (v. Ort) | AG | Ablesung aus Betriebstechnik | mV | -7 |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,5 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | 0,033 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | 0,11 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | 0,14 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-MID II |
|---|---|---|---|---|
| Labornummer | | | | AP2552179 |
| Probenahmedatum | | | | 28.08.25-11:10h |
| Probenahmeort | | | | Katterbach |
| Parameter | | Methode | Einheit | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,0 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,4 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 14,8 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 844 |
| Redoxpotential (v. Ort) | AG | Ablesung aus Betriebstechnik | mV | 4 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | 0,037 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | 0,037 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | | TS3-REIN |
|---|---|---|---|---|
| Labornummer | | | | AP2552180 |
| Probenahmedatum | | | | 28.08.25-11:15h |
| Probenahmeort | | | | Katterbach |
| Parameter | | Methode | Einheit | |
| Sauerstoff (v. Ort) | AG | DIN ISO 17289 (G25):2014-12* | mg/l | 4,2 |
| pH-Wert (v. Ort) | AG | DIN EN ISO 10523 (C5):2012-04* | | 6,3 |
| Temperatur (v. Ort) | AG | DIN 38404-C4 :1976-12* | °C | 14,8 |
| Leitf. (v. Ort,25°C) | AG | DIN EN 27888 (C8):1993-11* | µS/cm | 830 |
| Redoxpotential (v. Ort) | AG | Ablesung aus Betriebstechnik | mV | 8 |
| **PFT** | | | | |
| Perfluornonansäure (PFNA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | | DIN 38407-F42:2011-03* | µg/l | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN-QA/QC |
|---|---|---|---|
| Labornummer | | | AP2552181 |
| Probenahmedatum | | | 28.08.25-11:15h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar
AG: Analytik durch Auftraggeber

Der Bericht ersetzt Prüfbericht AB2512576 vom 11.09.2025.
Änderung: AP2552180: Messwert (PFBS) wurde abgesichert und korrigiert.

[redacted]

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

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## PRÜFBERICHT [redacted]

| | |
|---|---|
| Auftraggeber: | [redacted] |
| Auftraggeber Adresse: | |
| Ihr Zeichen/Bestell-Nr.: | 24677824 |
| Probenahmeort: | Katterbach Kaserne Ansbach |
| Probenehmer: | Herr Köller / Auftraggeber |
| Probenahmedatum: | 25.09.2025 |
| Probeneingangsdatum: | 26.09.2025 |
| Prüfzeitraum: | 26.09.2025 - 06.10.2025 |
| Gesamtseitenzahl: | 5 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2558538 |
| Probenahmedatum | | | 25.09.25-11:23h |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 15,4 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 285 |
| Redoxpotential (v. Ort) | Ablesung aus Betriebstechnik | mV | -26 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 5,8 |
| Säurekapazität Ks4,3 | DIN 38409-H7:2005-12* | mmol/l | 5,9 |
| Gesamtgehalt gelöster Feststoffe (TDS) | DIN EN 15216:2008-01* | mg/l | 427 |
| Trockenrückstand | DIN 38409-H1:1987-01* | mg/l | 447 |
| **Anionen** | | | |
| Chlorid | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 48 |
| Sulfat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 31 |
| Nitrat | DIN EN ISO 10304-1 (D20):2009-07* | mg/l | 29 |
| **Org. Summenparameter** | | | |
| TOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,7 |
| DOC | DIN EN 1484 (H3):2019-04* | mg/l | 2,6 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-ROH |
|---|---|---|---|
| Labornummer | | | AP2558538 |
| Probenahmedatum | | | 25.09.25-11:23h |
| Probenahmeort | | | Katterbach |
| Parameter | Methode | Einheit | |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | 0,39 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | 15 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | 0,46 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | 6 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | 0,35 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,26 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | 1,1 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | 0,4 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | 0,34 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,8 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 26 |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-MID | TS3-MID II | TS3-REIN |
|---|---|---|---|---|---|
| Labornummer | | | AP2558539 | AP2558540 | AP2558541 |
| Probenahmedatum | | | 25.09.25-11:13h | 25.09.25-11:13h | 25.09.25-11:08h |
| Probenahmeort | | | Katterbach | Katterbach | Katterbach |
| Parameter | Methode | Einheit | | | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | - | - | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | 15,5 | 15,5 | 15,5 |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | 232 | 215 | 216 |
| Redoxpotential (v. Ort) | Ablesung aus Betriebstechnik | mV | -21 | -21 | -18 |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | 3,9 | 3,8 | 3,9 |
| **PFT** | | | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | 0,18 | 0,09 | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 | <0,01 | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | 0,027 | <0,01 | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | 0,21 | 0,09 | n.n. |

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## Untersuchungsergebnis Grundwasser

| Probenbezeichnung | | | TS3-REIN-QA/QC |
|---|---|---|---|
| Labornummer | | | AP2558542 |
| Probenahmedatum | | | 25.09.25-11:08h |
| Probenahmeort | | | Katterbach |
| **Parameter** | **Methode** | **Einheit** | |
| pH-Wert (v. Ort) | DIN EN ISO 10523 (C5):2012-04* | | - |
| Temperatur (v. Ort) | DIN 38404-C4 :1976-12* | °C | - |
| Leitf. (v. Ort,25°C) | DIN EN 27888 (C8):1993-11* | µS/cm | - |
| Redoxpotential (v. Ort) | Ablesung aus Betriebstechnik | mV | - |
| Sauerstoff (v. Ort) | DIN ISO 17289 (G25):2014-12* | mg/l | - |
| **PFT** | | | |
| Perfluornonansäure (PFNA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäure (PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansäure (PFOA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansulfonsäure (PFHxS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorhexansäure (PFHxA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansulfonsäure (PFBS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorbutansäure (PFBA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluordecansäure (PFDA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| 1H,1H,2H,2H-Perfluoroctyl-Sulfonsäure (H4PFOS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluoroctansulfonsäureamid (PFOSA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansulfonsäure (PFHpS) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorheptansäure (PFHpA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Perfluorpentansäure (PFPeA) | DIN 38407-F42:2011-03* | µg/l | <0,01 |
| Summe PFAS | DIN 38407-F42:2011-03* | µg/l | n.n. |

n.n. = nicht nachweisbar

Analytik Institut Rietzler GmbH, Fürth, den 07.10.2025

Die Akkreditierung gilt für die im Prüfbericht mit * gekennzeichneten Prüfverfahren. | Modifizierte Normverfahren sind durch den Zusatz (mod.) im Prüfbericht gekennzeichnet und in der jeweiligen Anlage zur Akkreditierungsurkunde beschrieben. | Die Ergebnisse im Prüfbericht werden in vereinfachter Weise i. S. der DIN EN ISO/IEC 17025:2018-03 Abs. 7.8.1.3 berichtet. | Die erweiterten Messunsicherheiten werden im Prüfbericht nicht angegeben und bei der Bewertung der Konformität mit den Regelwerken nicht berücksichtigt. Auf Anfrage können die Messunsicherheiten nachgereicht werden. | Die Prüfergebnisse beziehen sich ausschließlich auf die angegebenen Proben, wie erhalten. | Der Prüfbericht darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden.

# Anhang F Bescheide Stadt Ansbach

F.1 - Bohranzeige nach §49 Wasserhaushaltsgesetz und Art. 30 Bayerisches Wassergesetz für die Erstellung der Messstellen und Entnahmebrunnen vom 24.02.2024

F.2 - Beschränkte Erlaubnis zur Bauwasserhaltung gem. Art. 15 Abs. 2 BayWG bzw. Art. 70 Abs. 1 Nr. 3 BayWG für die Bohrarbeiten und erdbautechnischen Maßnahmen vom 27.02.2024

F.3 - Beschränkte Erlaubnis zur Bauwasserhaltung gem. Art. 15 Abs. 2 BayWG bzw. Art. 70 Abs. 1 Nr. 3 BayWG für den Betrieb der Reinigungsanlage TS3 vom 18.07.2024

[redacted]

F.1 Drilling Request according to §49 Wasserhaushaltsgesetz und Art. 30 Bayerisches Wassergesetz for installation of monitoring and extraction wells from 24.02.2024

F.1 Bohranzeige nach §49 Wasserhaushaltsgesetz und Art. 30 Bayerisches Wassergesetz für die Erstellung der Messstellen und Entnahmebrunnen vom 24.02.2024

STADT ANSBACH

[redacted]

Joh.-Seb.-Bach-Platz 1 · 91522 Ansbach
Tel.0981/51-0 Vermittlung
Fax 0981/51-303 (Sammelnummer)
Internet: http://www.ansbach.de
zentrale e-mail: stadt@ansbach.de

**Allgemeine Öffnungszeiten**

Montag bis Freitag 8-12 Uhr
Montag 13-16 Uhr
Donnerstag 13-18 Uhr

sowie nach Terminvereinbarung

| Amt | Dienstgebäude | Zimmer | Unser Zeichen | Ihr Zeichen | Ihre Nachricht |
|---|---|---|---|---|---|
| Umweltamt | [redacted] | | | | |
| **Ihr/e Ansprechpartner/in** | **Telefon** | **Fax** | **e-mail** | | **Datum** |
| [redacted] | | | wasserrecht@ansbach.de | | 23.02.2024 |

**Vollzug der Wassergesetze;**
**Anzeige für die Errichtung von sechs Entnahmebrunnen und zwei Grundwassermessstellen im Rahmen der geplanten Sanierungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach, im westlichen Bereich des Flugplatzes auf dem Grundstück Flst. Nr. 1145 Gemarkung Hennenbach**

Anlagen
1 Bohrbeginnsanzeige
1 Fertigstellungsanzeige
1 Empfangsbestätigung g. R.

Die Stadt Ansbach erlässt folgenden

**B e s c h e i d:**

1. Der [redacted] – Anzeigende – wird die Zustimmung zur Niederbringung von insgesamt acht Erdaufschlüssen zur Errichtung von sechs Entnahmebrunnen und zwei Grundwassermessstellen auf dem Gelände der Kaserne Katterbach, Grundstück Flst. Nr. 1145 Gemarkung Hennenbach, im westlichen Bereich des Flugplatzes, erteilt.

2. Diesem Bescheid liegt die Bohranzeige der [redacted] vom 18.01.2024, eingegangen bei der Stadt Ansbach per E-Mail am 19.01.2024 und beim Umweltamt der Stadt Ansbach am 07.02.2024, zugrunde. Diese ist Bestandteil des Bescheides.

3. Inhalts- und Nebenbestimmungen für die Niederbringung der Aufschlussbohrungen

3.1. Die Zustimmung für die Niederbringung der Erdaufschlüsse wird befristet bis zum 20.02.2025 erteilt. Eine eventuell erforderliche Verlängerung ist rechtzeitig bei der unteren Wasserrechtsbehörde der Stadt Ansbach zu beantragen.

3.2. Die Erstellung der Brunnen und Grundwassermessstellen ist von zertifizierten Fachbetrieben (Zertifizierung nach DVGW-Arbeitsblatt W 120 bzw. W 120-1 oder vergleichbare Qualifikation) gemäß DVGW-Arbeitsblatt W 121 (Messstellenausbau, Verhältnis Bohr- und Ausbaudurchmesser gemäß Mindestanforderungen des DVGW-Arbeitsblattes W 121) auszuführen.

3.3. Der Beginn der Bauarbeiten ist der unteren Wasserrechtsbehörde der Stadt Ansbach und dem Wasserwirtschaftsamt Ansbach mind. eine Woche vorher anzuzeigen. Die Vollendung der Bauarbeiten ist unverzüglich anzuzeigen.

**3.4. Die Bohrtiefen der Entnahmebrunnen sind bei max. 8 m Tiefe zu beenden.**

**3.5. Die Grundwassermessstellen (GWM37 und GWM92a) dürfen lediglich im Blasenstandstein niedergebracht werden. Angezeigt wurden Bohrtiefen von 30 m, das Wasserwirtschaftsamt geht jedoch davon aus, dass der Blasensandstein lokal 25 m mächtig ist. Zur Feststellung der Schichtgrenze darf max. 1 m in die Lehrbergschichten gebohrt werden.**

3.6. Durch die Erdaufschlüsse darf keine Schadstoffverfrachtung in tiefere Schichten erfolgen.

3.7. Die Messstellen bzw. Brunnen sind im Bereich der wasserungesättigten Zone gegen das Erdreich fachgerecht abzudichten und mit einem wasserdichten Messstellenkopf auszustatten. Der Messstellenabschluss muss vor dem Zugriff Dritter gesichert sein.

3.8. Anfallender Erdaushub ist fachgerecht zu entsorgen. Das Verfüllen der Aufschlüsse mit Bohrgut oder Aushub ist nicht zulässig.

3.9. Überbohren GWM37 (Kennzahl BIS 6629BG015057)
Der Rückbau ist nach dem Stand der Technik (Detaillierte Hinweise zur Sanierung und Rückbau von Grundwassermessstellen sind im Arbeitsblatt DVGW W 135 enthalten) wie in der Anzeige beschrieben auszuführen. Der Rück- und Neubau der Grundwassermessstelle erfolgt durch Entfernen der Ausbauverrohrung durch Ziehen, Ausräumen des Bohrlochs, Überbohren und neuem Ausbau.

3.10. Nach Rückverfüllung der Aufschlüsse, dürfen im Vergleich zur derzeitigen Situation keine erhöhten hydraulischen Durchlässigkeiten zwischen dem Anstehenden und den unterlagernden Schichten bestehen.

3.11. Nach Abschluss der Maßnahme sind die Bohrungen im Kontraktorverfahren mit plastischem Beton zu verfüllen. Bei Aufgabe der Nutzung ist der Brunnen für die Bauwasserhaltung ordnungsgemäß zurückzubauen. Ein Rückbaukonzept mit Verfüllplan ist der unteren Wasserrechtsbehörde der Stadt Ansbach und dem Wasserwirtschaftsamt Ansbach zur Prüfung vorzulegen.

3.12. Spätestens vier Wochen nach Fertigstellung der Bohrung sind folgende Unterlagen der unteren Wasserrechtsbehörde der Stadt Ansbach und dem Wasserwirtschaftsamt Ansbach vorzulegen:

a. Koordinaten (Koordinatenbezugsystem ETRS89/UTM Zone 32 (EPSG 25832); zentimetergenaue Angabe) und Höhe (Höhenmessungen [m ü.

NHN] (DHN2016; 2 Nachkommastellen) mit Angabe der Messmethoden) von Messpunkt, Geländeoberkante

b. Ausbauplan (inkl. Abschlussbauwerk und Messstellen- Brunnenkopf)

c. Farbfoto von Abschlussbauwerk

d. Farbfoto von Bohrgutproben (1 Probe pro Bohrmeter) mit Tiefenangabe

e. Schichtenverzeichnis mit Kopfblatt und Bohrprofil nach DIN (Schichtenverzeichnis und Kopfblatt nach DIN 4022, Bohrprofil nach DIN 4023)

f. Bohrtagesberichte

g. Pumpversuchsauswertung (inkl. graphische Darstellung; ggf. diagnostische Plots; vgl. WITT: Grundbau-Taschenbuch; Teil 2; 8. Auflage)

3.13. Es ist dauerhaft eine Messstellenakte (Messstellenakte nach DVWG W121 Absatz 8.3.) bzw. Brunnenakte (Brunnenakte nach DVWG W123 Absatz 8.3.) zu führen. Beides ist bei einem Grundstücksverkauf dem neuen Eigentümer auszuhändigen.

4. Für die Entnahme von Grundwasser zum Zweck der Abreinigung (Sicherungsmaßnahme) der mittels des in Nr. 1. dieses Bescheides genannten Entnahmebrunnen ist eine wasserrechtliche Erlaubnis bei der unteren Wasserrechtsbehörde der Stadt Ansbach zu beantragen.

5. Dieser Bescheid ergeht kostenfrei.

**Gründe:**

I.

Die [redacted] zeigt mit Anzeige vom 18.01.2024, eingegangen bei der Stadt Ansbach per E-Mail am 19.01.2024 und beim Umweltamt der Stadt Ansbach am 07.02.2024, an.

Anzeigt wird die Errichtung von sechs Entnahmebrunnen (Tiefe 8 m) und zwei Grundwassermessstellen (Tiefe 30 m) im Rahmen der geplanten Sanierungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach, im westlichen Bereich des Flugplatzes auf dem Grundstück Flst. Nr. 1145 Gemarkung Hennenbach.

Eigentümerin des betroffenen Grundstückes ist die [redacted]

Das [redacted] nahm als amtlicher Sachverständiger zu der wasserrechtlichen Anzeige mit Schreiben vom 15.02.2024, eingegangen per E-Mail am 15.02.2024 Stellung.

II.

## 1. Zuständigkeit

Die Stadt Ansbach ist für den Erlass dieses Bescheides sachlich und örtlich zuständig, Art. 63 Abs.1 Satz 2 BayWG, Art. 3 Abs. 1 Nr. 1 Bayerisches Verwaltungsverfahrensgesetz (BayVwVfG).

## 2. Gewässerbenutzung

### 2.1. Erlaubnispflicht für Einbringen von Stoffen in Gewässer

Bei der Niederbringung der Erdaufschlüsse zur Errichtung von Entnahmebrunnen und Grundwassermessstellen handelt es sich um Gewässerbenutzungen, die nach § 8 Abs. 1 WHG grundsätzlich einer Erlaubnis bedürfen, da Stoffe in das Grundwasser eingebracht werden (§ 9 Abs. 1 Nr. 4 WHG).

Von diesem Grundsatz kann nach § 49 Abs. 1 Satz 2 WHG jedoch abgewichen werden, wenn sich die Niederbringung der Erdaufschlüsse bzw. wenn sich die Arbeiten, die mit der Errichtung des Brunnens verbunden sind, nicht nachteilig auf die Grundwasserbeschaffenheit auswirken.

Die angezeigten Erdaufschlüsse setzen im Blasensandstein an. Dieser ist lokal ca. 25 m mächtig und bildet das oberflächennahe 1. Grundwasserstockwerk. Darunter folgen die Lehrbergschichten (Stauer).

Im Rahmen der Erlaubnisfreiheit darf nur das oberflächennahe Grundwasser im Blasensandstein aufgeschlossen werden. Aus diesem Grund wird lediglich einer Bohrtiefe bis max. 15 m zugestimmt.

Die Bohrungen liegen nicht im festgesetzten Trinkwasserschutzgebiet.

Nachteilige Auswirkungen auf die Grundwasserbeschaffenheit sind bei Einhaltung der in Nr. 3. genannten Inhalts- und Nebenbestimmungen nicht zu erwarten.

## 3. Rechtsfolge und Ermessen

Die Entscheidung, dass für die Niederbringung des Erdaufschlusses zur Baugrunderkundung und den Ausbau zu einem temporären Entnahmebrunnen keine wasserrechtliche Erlaubnis erforderlich ist, steht im pflichtgemäßen Ermessen (Art. 40 BayVwVfG) der Unteren Wasserrechtsbehörde der Stadt Ansbach.

## 4. Inhalts- und Nebenbestimmungen

Anzeige- und Informationspflichten
Die Bestimmungen zur Anzeige- und Informationspflicht sind notwendig um eine rechtzeitige Unterrichtung der Behörden und ggf. sonstiger Beteiligter über den aktuellen Stand bzw. Fortlauf der Maßnahme zu gewährleisten.

Bohrtiefe
Der Angezeigte Erdaufschluss und der temporäre Entnahmebrunnen setzen im Blasensandstein an. Nach vorliegenden Erkenntnissen ist dieser lokal ca. 15 m mächtig und bildet das oberflächennahe erste Grundwasserstockwerk. Darunter folgen die Lehrbergschichten (Stauer). Aus diesem Grund wird lediglich einer Bohrtiefe bis max. 15 m zugestimmt. Zur Feststellung der Schichtgrenze darf max. 1 m in die Lehrbergschichten gebohrt werden.

bauliche Ausführungen
Getroffene Auflagen in Bezug auf die baulichen Ausführungen, sowie die Verwendung und den Umgang von verschiedenen Materialien, dienen zur Vermeidung von nachteiligen Wirkungen auf das genutzte Grundwasser. Es gilt durch eine nachhaltige Gewässerbewirtschaftung das Grundwasser als Bestandteil des Naturhaushalts und als Lebensgrundlage von Menschen, Tieren und Pflanzen zu erhalten und zu schützen. Das Grundwasser als schützenswertes Gut und Grundlage für unsere Trinkwasserversorgung heute und auch zukünftig erlangt hierdurch einen besonderen Stellenwert.

Bohrdokumentation
Mittels der vorzulegenden Dokumentation ist die Überprüfung der Auswirkungen, welche von der Maßnahme auf das benutzte Grundwasser ausgehen, möglich.

Befristung
Die Zustimmung ist auf ein Jahr befristet, da sich die Randbedingung, die zu dieser geführt haben im Laufe der Zeit ändern können.

Rechtsfolge und Ermessen
Die Anordnung der Inhalts- und Nebenbestimmungen steht im pflichtgemäßem Ermessen der unteren Wasserrechtsbehörde der Stadt Ansbach (Art. 40 BayVwVfG). Die Erfüllung der Inhalts- und Nebenbestimmungen ist möglich und geeignet, um nachteiligen Gewässerveränderungen entgegenzuwirken. Diese sind erforderlich, da keine milderen Mittel ersichtlich sind. Zudem sind diese auch angemessen.

## 5. Erlaubnispflicht für Zutagefördern und Entnahmen von Grundwasser

Bei dem Zutagefördern und Entnahmen von Grundwasser (§ 9 Abs. 1 Nr. WHG) handelt es sich um eine Gewässerbenutzung, die nach § 8 Abs. 1 WHG einer Erlaubnis bedarf.

Von diesem Grundsatz kann nach § 46 WHG und Art. 29 BayWG jedoch abgewichen werden, wenn einer der dort genannten erlaubnisfreien Benutzungstatbestände für die Benutzung des Grundwassers erfüllt wird. Es liegen keine erlaubnisfreien Benutzungstatbestände vor.

Nach Ausbau der Entnahmebrunnen ist daher für die Entnahme von Grundwasser zum Zweck der Abreinigung (Sicherungsmaßnahme) eine wasserrechtlichen Erlaubnis zu beantragen.

## 6. Kostenentscheidung

Das Verwaltungsverfahren und die Erteilung einer Zustimmung, unter Einhaltung der genannten Inhalts- und Nebenbestimmungen, ist grundsätzlich kostenpflichtig. Dieser Bescheid ergeht aufgrund persönlicher Gebührenfreiheit kostenfrei (vgl. Art. 1, Art. 2 und Art. 4 Abs. 2 des Kostengesetztes (KG)). Es entstanden keine Auslagen.

## Rechtsbehelfsbelehrung

Gegen diesen Bescheid kann innerhalb eines Monats nach seiner Bekanntgabe Klage erhoben werden bei dem

Bayerischen Verwaltungsgericht in 91522 Ansbach,
Hausanschrift: Promenade 24, 91522 Ansbach.

## Hinweise zur Rechtsbehelfsbelehrung

Die Einlegung des Rechtsbehelfs ist schriftlich, zur Niederschrift oder elektronisch in einer für den Schriftformersatz zugelassenen Form möglich. Die Einlegung eines Rechtsbehelfs per einfacher E-Mail ist nicht zugelassen und entfaltet keine rechtlichen Wirkungen!

Ab 01.01.2022 muss der in § 55d VwGO genannte Personenkreis Klagen grundsätzlich elektronisch einreichen.

[Sofern kein Fall des § 188 VwGO vorliegt:] Kraft Bundesrechts wird in Prozessverfahren vor den Verwaltungsgerichten infolge der Klageerhebung eine Verfahrensgebühr fällig.

Hinweise:

- Es wird empfohlen, zum Schutz nachbarschaftlicher Rechte einen angemessenen Abstand (ca. 5 m) der Bohrung von den Grundstücksgrenzen einzuhalten.

- Für den Antragsteller besteht eine Gefährdungshaftung, die auch ohne Verschulden zum Ersatz entstandener Schäden verpflichtet, wenn auf ein Gewässer derart eingewirkt wird, dass sich die physikalische, chemische oder biologische Beschaffenheit des Wassers nachteilig verändert (§ 89 WHG).

- Die Beurteilung der Antragsunterlagen ist auf wasserrechtliche Belange beschränkt. Sie ist keine eingehende technische Entwurfsprüfung. Auch Fragen der Standsicherheit von Bauwerken, des Arbeitsschutzes u. a. wurden nicht geprüft.

- Privatrechtliche Belange wurden nicht geprüft. Vor Beginn der Erdaufschlüsse ist daher Kontakt mit dem Grundstückseigentümer aufzunehmen.

[redacted]

[redacted]

F.2 Limited approval for dewatering according to Art. 15 Abs. 2 BayWG and Art. 70 Abs. 1 Nr. 3 BayWG for the drilling and costruction work from 27.02.2024

F.2 Beschränkte Erlaubnis zur Bauwasserhaltung gem. Art. 15 Abs. 2 BayWG bzw. Art. 70 Abs. 1 Nr. 3 BayWG für die Bohrarbeiten und erdbautechnischen Maßnahmen vom 27.02.2024

STADT ANSBACH

[redacted]

Joh.-Seb.-Bach-Platz 1 · 91522 Ansbach
Tel.0981/51-0 Vermittlung
Fax 0981/51-303 (Sammelnummer)
Internet: http://www.ansbach.de
zentrale e-mail: stadt@ansbach.de

**Allgemeine Öffnungszeiten**

Montag bis Freitag 8-12 Uhr
Montag 13-16 Uhr
Donnerstag 13-18 Uhr

sowie nach Terminvereinbarung

| Amt | Dienstgebäude | Zimmer | Unser Zeichen | Ihr Zeichen | Ihre Nachricht |
|---|---|---|---|---|---|
| Umweltamt | [redacted] | | | | |
| **Ihr/e Ansprechpartner/in** | **Telefon** | **Fax** | **e-mail** | | **Datum** |
| [redacted] | | | wasserrecht@ansbach.de | | 27.02.2024 |

**Vollzug der Wassergesetze;**
**Grundwasserabsenkung und Grundwasserableitung während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach Ansbach, im westlichen Bereich des Flugplatzes, auf dem Grundstück Flst. Nr. 1145 Gemarkung Hennenbach und Einleitung des abgereinigten Grundwassers über die Einleitstelle E4 in den Katterbach (Gewässer III. Ordnung)**

Anlagen
1 Baubeginnsanzeige
1 Fertigstellungsanzeige
1 Empfangsbestätigung g. R.

Die Stadt Ansbach erlässt folgenden

**B e s c h e i d:**

## 1. Beschränkte Erlaubnis

### 1.1. Gegenstand der Erlaubnis

Der [redacted]
- Antragstellerin -, wird die widerrufliche beschränkte Erlaubnis zur Grundwasserabsenkung und -ableitung während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach, im westlichen Bereich des Flugplatzes, auf dem Grundstück Flst. Nr. 1145 Gemarkung Hennenbach, sowie der Einleitung des abgereinigten Grundwassers über die Einleitstelle E4 in den Katterbach (Gewässer III. Ordnung), erteilt.

## 1.2. Zweck der Gewässerbenutzung

Die erlaubte Gewässerbenutzung dient der erforderlichen Bauwasserhaltung während der Bauzeit der Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katter[redacted]nende Grundwasser wird zutage gefördert, abgereinigt und ans[redacted]ie Einleitstelle E4 in den Katterbach (Gewässer III. Ordnung) abg[redacted]

## 1.3. Antragsunterlagen

Der wasserrechtlichen Gestattung liegt der Antrag der [redacted] vom 12.02.2024 zugrunde. Diese sind Bestandteil dieses Bescheides.

## 1.4. Inhalts- und Nebenbestimmungen

Für die erlaubt Gewässerbenutzung sind die einschlägigen Vorschriften des Wasserhaushaltsgesetzes (WHG) und des Bayer. Wassergesetzes (BayWG) mit den dazu ergangenen Verordnungen maßgebend. Die hiernach bestehenden Rechte, Verpflichtungen und Vorbehalte sind in den folgenden Erlaubnisbedingungen und Auflagen grundsätzlich nicht enthalten.

1.4.1. Die beschränkte Erlaubnis wird **befristet bis zum 31.12.2024** erteilt. Eine eventuell darüber hinaus erforderliche Erlaubnis ist rechtzeitig bei der unteren Wasserrechtsbehörde der Stadt Ansbach zu beantragen.

1.4.2. Das geförderte Grundwasser ist gemäß der geplanten Vorgehensweise in wasserdichten Containern zwischen zu speichern, über die Reinigungsanlage (Kompaktanlage Fa. Züblin) abzureinigen und anschließend über die Kanalisation zur Einleitstelle E4 in das Gewässer Katterbach abzuleiten.

1.4.3. Für die Speicherung des geförderten Grundwassers sind bis zur Reinigung ausreichend Kapazitäten sicherzustellen. **Das Ableiten von verschmutztem/belastetem Grundwasser in das Gewässer Katterbach ist nicht zulässig.**

1.4.4. Sollte eine Ableitung in das Schmutzwasserkanalnetz zur Kläranlage Ansbach erforderlich werden, ist zwingend vorab eine Abstimmung mit der Abwasserentsorgung Ansbach AöR (awean) erforderlich.

1.4.5. **Eine Ableitung in das Gewässer Katterbach darf erst erfolgen, wenn die Reinigungsziele bzw. Einleitgrenzwerte von 0,02 µg/l für PFOS und 0,2 µg/l für PFAS (gesamt) eingehalten werden.**

1.4.6. Eine Überwachung der Reinigungsziele bzw. Einleitgrenzwerte (s. Nr. 1.4.5.) und die Einhaltung dieser sind während des Betriebes **dauerhaft sicherzustellen und zu dokumentieren**.

1.4.7. Die maximale Beschickung der Reinigungsanlagen (Kompaktanlage Fa. Züblin, Durchlaufkapazität von 10 l/s) ist zu beachten. Eine hydraulische Überlastung der Grundwasserreinigungsanlage ist nicht zulässig.

1.4.8. Alle Vorrichtungen zur Grundwasserabsenkung, z.B. Dränleitungen und Brunnen, sind so anzulegen, dass sie nach Fertigstellung der Baustelle restlos außer Betrieb gesetzt werden können. Sie sind so bald wie möglich wieder außer Betrieb zu setzen, damit sich die ursprünglichen Grundwasserverhältnisse wieder einstellen können.

1.4.9. Stoffe aller Art, die eine Verunreinigung des Grundwassers bewirken können, sind den Baugruben fernzuhalten. Mineralöle oder sonstige schädliche Stoffe dürfen im Bereich der Baugrube nicht gelagert werden, damit bei unbeabsichtigtem Auslaufen keine, das Grundwasser schädigende Stoffe, von oben oder seitlich durch den Boden einsickern können.

1.4.10. Nach dem Verlegen der Rohrleitungen und der Errichtung der Bauwerke sind die Baugruben mit unbelastetem Bodenmaterial/Bodenaushub entsprechend der geltenden Vorgaben der Ersatzbaustoffverordnung und der Bodenschutzgesetze wieder zu verfüllen. Bauschutt und sonstiger Abfall darf hierzu nicht verwendet werden. Es ist sicherzustellen, dass weder ein Grundwasserstau verursacht, noch dem Grundwasser eine bevorzugte Fließrichtung gegeben wird.

1.4.11. Das Grundwasser ist vor der Bauausführung auf das Baumaterial schädigende Eigenschaften zu untersuchen. Für die Rohrleitungen und die Bauwerke ist nur solches Material zu verwenden, das allen mechanischen und chemischen Angriffen des Abwassers und des Grundwassers widersteht.

1.4.12. Bei erforderlichen Grundwasserabsenkungen in bebauten Gebieten ist vor der Bauausführung eine Beweissicherung durchzuführen. Eventuell sind weitere Gutachter einzuschalten, damit geeignete Abhilfemaßnahmen vorgeschlagen werden können.

1.4.13. Baubeginn und -vollendung sind der unteren Wasserrechtsbehörde der Stadt Ansbach und dem Wasserwirtschaftsamt Ansbach mind. sieben Tage vorher anzuzeigen. Die Fertigstellung ist unverzüglich mitzuteilen. Wird das Vorhaben in mehreren Bauabschnitten ausgeführt, so sind Beginn und Vollendung jedes Bauabschnittes anzuzeigen mind. sieben Tage vorher und nach Fertigstellung unverzüglich anzuzeigen.

1.4.14. Wesentliche Änderungen gegenüber den Antragsunterlagen bezüglich der Menge und Beschaffenheit des anfallenden Abwassers, Änderungen der baulichen Anlagen sowie der Betriebs- und Verfahrensweise der Abwasseranlagen, soweit sie sich auf die Ablaufqualität auswirken können, sind unverzüglich der unteren Wasserrechtsbehörde der Stadt Ansbach und dem Wasserwirtschaftsamt Ansbach anzuzeigen. Außerdem ist rechtzeitig eine hierzu erforderliche bau- bzw. wasserrechtliche Genehmigung bzw. Erlaubnis mit den entsprechenden Unterlagen zu beantragen.

1.4.15. Für den Betrieb, die Überwachung und die Unterhaltung der Anlage ist ausgebildetes und zuverlässiges Personal in ausreichender Zahl einzusetzen.

**2. Kosten**

Dieser Bescheid ergeht kostenfrei.

## Gründe:

I.

Die [redacted], beantragt mit Antragsunterlagen vom 12.02.2024, eingegangen bei der Stadt Ansbach per E-Mail am 12.02.2024, die Erteilung einer beschränkten Erlaubnis für das Absenken und Ableiten von Grundwasser während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach, im westlichen Bereich des Flugplatzes, auf dem Grundstück Flst. Nr. 1145 Gemarkung Hennenbach, sowie die Einleitung des abgereinigten Grundwassers über die Einleitstelle E4 in das Gewässer Katterbach.

Eigentümerin des betroffenen Grundstückes ist die [redacted].

Der amtliche Sachverständige, Wasserwirtschaftsamt Ansbach, erstellte zu den Antragsunterlagen am 20.02.2024 ein Gutachten.

II.

1. Zuständigkeit

Die Stadt Ansbach ist für den Erlass dieses Bescheides sachlich und örtlich zuständig, Art. 63 Abs.1 Satz 2 BayWG, Art. 3 Abs. 1 Nr. 1 Bayerisches Verwaltungsverfahrensgesetz (BayVwVfG).

2. Gewässerbenutzung

2.1 Genehmigungsbedürftigkeit

Das Absenken und das Ableiten von Grundwasser während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser auf dem Gelände der Kaserne Katterbach, stellen Gewässerbenutzungen nach § 9 Abs. 1 Nr. 5 WHG dar. Auch das Einleiten des abgereinigten Grundwassers in das oberirdische Gewässer Katterbach stellt eine Gewässerbenutzung nach § 9 Abs. 1 Nr. 4 WHG dar.

Mit der Freilegung von Grundwasser wird ein Zutageleiten von Grundwasser (§ 9 Abs. 1 Nr. 5 Alt. 3 WHG) bewirkt. Das sich anschließende Abpumpen des Grundwassers aus den Baugruben/Schächten/Gräben stellt ein Ableiten (§ 9 Abs. 1 Nr. 5 Alt. 4 WHG) dar.

Die Benutzungen des Gewässers bedürfen nach § 8 Abs. 1 WHG grundsätzlich einer Erlaubnis.

2.2 Genehmigungsfähigkeit

Die wasserrechtliche Erlaubnis ist gemäß § 12 Abs. 1 Nr. 1 und Nr. 2 WHG zu versagen, wenn schädliche, auch durch Nebenbestimmungen nicht vermeidbare oder nicht ausgleichbare Gewässerveränderungen zu erwarten sind und andere Anforderungen nach öffentlich-rechtlichen Vorschriften nicht erfüllt werden.

a) schädliche Gewässerveränderungen
Schädliche Gewässerveränderungen sind Veränderungen von Gewässereigenschaften, die das Wohl der Allgemeinheit, insbesondere die öffentliche Wasserversorgung, beeinträchtigen oder die nicht den Anforderungen entsprechend, die sich aus dem Wasserhaushaltsgesetz, auf Grund dieses Gesetztes erlassenen oder aus sonstigen wasserrechtlichen Vorschriften ergeben, § 3 Nr. 10 WHG.

Bei Einhaltung der in Nr. 1.4. genannten Inhalts- und Nebenbestimmungen sind keine Auswirkungen auf die Grundwasserbeschaffenheit des Grundwassers und des oberirdischen Gewässers zu erwarten.

b) andere Anforderungen nach öffentlich-rechtlichen Vorschriften
Im vorliegenden Fall ergeben sich keine weiteren Anforderungen nach anderen öffentlich-rechtlichen Vorschriften.

Nachdem bei einer fachgerechten und bescheidgemäßen Ausführung der geplanten Grundwasserabsenkung und –ableitung sowie Einleitung in das oberirdische Gewässer, unter Einhaltung der festgesetzten Inhalts- und Nebenbestimmungen (Nr. 1.4.), keine schädlichen Gewässerveränderungen zu erwarten sind, Anforderungen nach anderen öffentlich-rechtlichen Vorschriften nicht zu erfüllen sind (§ 12 Abs. 1 Nr. 2 WHG) und zudem das Gewässer nur zu einem vorübergehenden Zweck und für einen Zeitraum von nicht mehr als einem Jahr benutzt werden soll (Art. 15 Abs. 2 Satz 1 BayWG) und keine Versagungsgrüne vorliegen, wird die beschränkte Erlaubnis für die Gewässerbenutzungen erteilt.

2.3 Rechtsfolge Ermessen

Die Erteilung der beschränkten Erlaubnis steht im pflichtgemäßen Ermessen der unteren Wasserrechtsbehörde der Stadt Ansbach.

Das Interesse der Antragstellerin liegt in der Trockenlegung der Baugruben/Schächten/Gräben während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser, aber auch der Einleitung des abgereinigten Grundwassers in ein oberirdisches Gewässer (Katterbach). Das Interesse der Allgemeinheit liegt darin das Grundwasser und das oberirdische Gewässer vor schädlichen Einflüssen und nachteiligen Veränderungen zu schütze. Bei Einhaltung der in Nr. 1.4. genannten Inhalts- und Nebenbestimmungen sind keine schädlichen Gewässerveränderungen zu befürchten. Das Interesse der Antragstellerin wird daher schwerer gewichtet, da das Grundwasser und das oberirdische Gewässer durch die einzuhaltenden Inhalts- und Nebenbestimmungen geschützt werden.

3. Zur Vermeidung nachteiliger Beeinträchtigungen durch die Gewässerbenutzung wurden Inhalts- und Nebenbestimmungen in den Bescheid aufgenommen, § 13 Abs. 1 WHG.

Demgemäß wird im vorliegenden Fall die beschränkte Erlaubnis auf die Dauer der Erforderlichkeit der Bauwasserhaltung, längstens bis zum 31.09.2024, befristet erteilt (Art. 36 Abs. 2 Nr. 1 BayVwVfG).

Die Auflagen zur Anzeige- und Informationspflicht sind notwendig um eine rechtzeitige Unterrichtung der Behörden und ggf. sonstiger Beteiligter über den aktuellen Stand bzw. Fortlauf der Maßnahme zu gewährleisten.

Getroffene Auflagen in Bezug auf die baulichen Ausführungen, sowie die Verwendung und den Umgang von verschiedenen Materialien, dienen zur Vermeidung von nachteiligen Wirkungen auf das genutzte Grundwasser und das oberirdische Gewässer. Es gilt durch eine nachhaltige Gewässerbewirtschaftung das Grundwasser sowie das oberirdische Gewässer als Bestandteil des Naturhaushalts und als Lebensgrundlage von Menschen, Tieren und Pflanzen zu erhalten und zu schützen. Das Grundwasser als schützenswertes Gut und Grundlage für unsere Trinkwasserversorgung heute und auch zukünftig erlangt hierdurch einen besonderen Stellenwert.

Mittels der vorzulegenden Dokumentation ist die Überprüfung der Auswirkungen, welche von der Maßnahme ausgehen, möglich.
Die Festsetzung der im Bescheid enthaltenen Inhalts- und Nebenbestimmungen steht im pflichtgemäßen Ermessen (Art. 40 BayVwVfG) der unteren Wasserrechtsbehörde der Stadt Ansbach.

Diese sind möglich und geeignet bei bescheidgemäßer Umsetzung schädlichen Gewässerveränderungen entgegen zu wirken. Sie sind erforderlich, da keine milderen Mittel ersichtlich sind. Zudem ist die Festsetzung im Bescheid auch angemessen, da diese im Interesse der Allgemeinheit ergehen. Das Interesse der Allgemeinheit besteht im Schutz des Grundwassers sowie des oberirdischen Gewässers vor schädlichen Gewässerveränderungen. Das Interesse der Antragstellerin liegt darin, die Baugruben/Schächten/Gräben während der Bauzeit für die Errichtung von Grundwasserentnahmebrunnen und Grundwassermessstellen sowie erforderlicher Erdarbeiten im Rahmen der geplanten Sicherungsmaßnahmen für PFAS-Belastungen im Grund- und Sickerwasser trocken zu legen und das Zutage geleitete Grundwasser über die Einleitstelle E4 in den Katterbach abzuleiten. Das Interesse der Allgemeinheit am Schutz des Grundwassers sowie des oberirdischen Gewässers überwiegt daher das Interesse der Antragstellerin, weshalb die Inhalts- und Nebenbestimmungen im Bescheid festgesetzte werden.

4. Kostenentscheidung

Das Verwaltungsverfahren und die Erteilung einer Zustimmung, unter Einhaltung der genannten Inhalts- und Nebenbestimmungen, ist grundsätzlich kostenpflichtig. Dieser Bescheid ergeht aufgrund persönlicher Gebührenfreiheit kostenfrei (vgl. Art. 1, Art. 2 und Art. 4 Abs. 2 des Kostengesetztes (KG)). Es entstanden keine Auslagen.

## Rechtsbehelfsbelehrung

Gegen diesen Bescheid kann innerhalb eines Monats nach seiner Bekanntgabe Klage erhoben werden bei dem

Bayerischen Verwaltungsgericht in 91522 Ansbach,
Hausanschrift: Promenade 24, 91522 Ansbach.

## Hinweise zur Rechtsbehelfsbelehrung

Die Einlegung des Rechtsbehelfs ist schriftlich, zur Niederschrift oder elektronisch in einer für den Schriftformersatz zugelassenen Form möglich. Die Einlegung eines Rechtsbehelfs per einfacher E-Mail ist nicht zugelassen und entfaltet keine rechtlichen Wirkungen!

Ab 01.01.2022 muss der in § 55d VwGO genannte Personenkreis Klagen grundsätzlich elektronisch einreichen.

[Sofern kein Fall des § 188 VwGO vorliegt:] Kraft Bundesrechts wird in Prozessverfahren vor den Verwaltungsgerichten infolge der Klageerhebung eine Verfahrensgebühr fällig.

gez. Unterschrift
[redacted]

Hinweise:

- Die Antragsunterlagen wurden in wasserwirtschaftlicher Hinsicht geprüft. Diese Prüfung stellt keine bautechnische Entwurfsprüfung dar.

- Die Belange des Arbeitsschutzes und die Standsicherheit wurden nicht geprüft. Es wird angeregt, für Anlagen und Einrichtungen, die nicht nach BayBO genehmigungspflichtig sind, die Standsicherheitsnachweise durch ein Prüfamt für Baustatik oder einen anerkannten Prüfingenieur für Baustatik prüfen zu lassen.

- Es ist darauf zu achten, dass die Belange des Arbeitsschutzes, insbesondere die „Sicherheitsregeln für Abwasserbehandlungsanlagen - Bau und Ausrüstung", die einschlägigen Unfallverhütungsvorschriften und die Baustellenverordnung vom 10.06.1998 eingehalten werden.

- Auf die Möglichkeit und Zweckmäßigkeit, für alle auf Privatgrundstücken verlegten Leitungen und Kanäle, für Zufahrten und Zugänge Grunddienstbarkeiten eintragen zu lassen, wird hingewiesen.

[redacted]

F.3 Limited approval for dewatering according to Art. 15 Abs. 2 BayWG and Art. 70 Abs. 1 Nr. 3 BayWG for the operation of treatment unit TS3 from 18.07.2024

F.3 Beschränkte Erlaubnis zur Bauwasserhaltung gem. Art. 15 Abs. 2 BayWG bzw. Art. 70 Abs. 1 Nr. 3 BayWG für den Betrieb der Reinigungsanlage TS3 vom 18.07.2024

[redacted]

STADT ANSBACH

Joh.-Seb.-Bach-Platz 1 · 91522 Ansbach

Tel.0981/51-0 Vermittlung
Fax 0981/51-303 (Sammelnummer)
Internet: http://www.ansbach.de
zentrale e-mail: stadt@ansbach.de

**Allgemeine Öffnungszeiten**

Montag bis Freitag 8-12 Uhr
Montag 13-16 Uhr
Donnerstag 13-18 Uhr

sowie nach Terminvereinbarung

| Amt | Dienstgebäude | Zimmer | Unser Zeichen | Ihr Zeichen | Ihre Nachricht |
|---|---|---|---|---|---|
| Umweltamt | [redacted] | | | | |
| **Ihr/e Ansprechpartner/in** | **Telefon** | **Fax** | **e-mail** | | **Datum** |
| [redacted] | | | | | 18.07.2024 |

**Vollzug der Wassergesetze;**
**Grundwasser-Abstromsicherung auf dem Kasernengelände Katterbach der U.S. Army Garrison (CCAN104 und CCAN126) durch die [redacted]**

Anlagen:
1 Plansatz
1 Rechnung
1 Formblatt „Empfangsbestätigung“ g. R.

Die Stadt Ansbach erlässt folgenden

***B e s c h e i d:***

1. Beschränkte Erlaubnis

1.1 Gegenstand der Erlaubnis, Zweck und Plan der Gewässerbenutzungen

1.1.1 Gegenstand der Erlaubnis

Der [redacted] – Unternehmensträger - wird die widerrufliche beschränkte Erlaubnis zur Benutzung von Grundwassers durch zu Tage fördern und Entnehmen sowie anschließendes Ableiten des Grundwassers über die bestehende Einleitungsstelle E4 in den Katterbach (Gewässer III. Ordnung) erteilt.

1.1.2 Zweck der Gewässerbenutzungen

Zweck der Benutzungen ist das zu Tage fördern und Entnehmen von PFC-belasteten Grundwassers aus Grundwassermessstellen/-brunnen im Bereich des ehemaligen Feuerlöschübungsplatzes auf dem Flughafengelände der US-Kaserne Katterbach (CCAN104) sowie aus dem Umfeld des Gebäudes 5801 (CCAN126), dessen abschließende Abreinigung in den Reinigungsanlagen TS2 und TS3 und das Einleiten des abgereinigten Grundwassers über die Einleitungsstelle E4 in das Gewässer Katterbach.

1.1.3 Plan

Den Gewässerbenutzungen liegen die Antragsunterlagen des Ingenieurbüros [redacted] vom Mai 2024 zugrunde. Die Antragsunterlagen sind mit dem Prüfvermerk des [redacted] vom 08.07.2024 sowie dem Genehmigungsvermerk der Stadt Ansbach vom 18.07.2024 versehen und Bestandteil des Bescheides.

1.2 Inhalts- und Nebenbestimmungen

1.2.1 Dauer der Erlaubnis

Die beschränkte Erlaubnis wird befristet bis **31.12.2027** erteilt.

1.2.2 Mit der in den Unterlagen der [redacted] vom Mai 2024 beschriebenen Vorgehensweise besteht Einverständnis.

1.2.3 Mit den im Antrag vorgeschlagenen Sanierungszielen und den Einleitkriterien in das oberirdische Gewässer von 0,2 µg/l für die Summe an PFAS und von 0,02 µg/l für den Einzelstoff PFOS besteht Einverständnis.

1.2.4 Die Antragsunterlagen sehen drei in Reihe geschaltete Filter mit einem Ionenaustauscherharz vor. Sollte sich im Rahmen des Monitorings zeigen, dass die Reinigungsleistung nicht ausreicht, sind Anpassungen an der Dimensionierung der Abreinigungsanlagen, z. B. durch Vorschalten eines Aktivkohlefilters, vorzunehmen.
Das Monitoring ist entsprechend der Nrn. 4.1 (Reinigungsanlage TS3) und 4.2 (Reinigungsanlage TS2) der Antragsunterlagen durchzuführen.

1.2.5 Die Grundwasserreinigungsanlagen sind nach der unter 1.2.4 genannten Vorgehensweise zu überwachen. Zusätzlich zur Analyse auf PFAS sind auch die Parameter pH-Wert, Sauerstoffgehalt, Temperatur, elektrische Leitfähigkeit und Feststoffgehalt des abgeleiteten Wassers im Rohwasser gemessen werden.

1.2.6 Das zu Tage geförderte Grundwasser ist schadlos abzuleiten. Das entnommene Grundwasser darf nur nach der in den Antragsunterlagen beschriebenen Reinigung abgeleitet werden.

1.2.7 Die Einleitmenge des abgereinigten Grundwassers über das Kanalnetz zur Einleitstelle E4 in den Katterbach ist je Reinigungsanlage auf maximal 3,6 m³/h (1,0 l/s) zu begrenzen.

1.2.8 Der Verlauf der Abreinigung und Einleitung über das Kanalnetz in den Katterbach ist in geeigneter Form zu protokollieren und zu dokumentieren. Neben den chemischen Ergebnissen sind auch die Wassermengen festzuhalten. Die Dokumentation sowie die Ergebnisse des Überwachungsprogramms sind der Stadt Ansbach - Umweltamt/Bodenschutz sowie dem Wasserwirtschaftsamt Ansbach in **einem jährlichen Bericht** vorzulegen.

1.2.9 Der Verlauf der Abreinigung und Einleitung über das Kanalnetz in den Katterbach ist in geeigneter Form zu protokollieren und zu dokumentieren. Neben den chemischen Ergebnissen sind auch die Wassermengen festzuhalten. Die Dokumentation sowie die Ergebnisse des Überwachungsprogramms sind der Stadt Ansbach – Umweltamt/Bodenschutz sowie dem Wasserwirtschaftsamt Ansbach in einem jährlichen Bericht vorzulegen.

1.2.10 Sollten Änderungen der geplanten Vorgehensweise erforderlich werden, so sind diese mit dem Wasserwirtschaftsamt Ansbach und der Stadt Ansbach – Umweltamt/Bodenschutz abzustimmen.

1.2.11 Nach Abschluss der Maßnahme ist ein Bericht der Stadt Ansbach – Umweltamt/Bodenschutz und dem Wasserwirtschaftsamt Ansbach vorzulegen.

1.2.12 Das entnommene, sichtbar verunreinigte Wasser ist über ein ausreichend dimensioniertes Absetzbecken zu führen, bevor es der weiteren Abreinigung zugeführt wird.

1.2.13 Sämtliche mit wassergefährdenden Stoffen (wgS) betriebene Anlagenteile sind durch zusätzliche Auffangwannen zu sichern. Ein Eintrag von wgS in den Untergrund ist unbedingt zu verhindern.

1.2.14 Beginn und Ende der Grundwasserentnahme/Abreinigung und Einleiten des Grundwassers sind dem Wasserwirtschaftsamt Ansbach umgehend und unaufgefordert schriftlich mitzuteilen. Besondere Vorfälle, insbesondere Vorfälle die eine Verunreinigung des Bodens oder von Gewässern besorgen lassen, z. B. Unfälle mit wassergefährdenden Stoffen, sind der Stadt Ansbach – Umweltamt/Bodenschutz und dem Wasserwirtschaftsamt Ansbach umgehend anzuzeigen.

2. <u>Kosten</u>

Der Antragsteller hat die Kosten des Verfahrens zu tragen. Für diesen Bescheid wird eine Gebühr in Höhe von 300,00 Euro festgesetzt. Der Antragsteller ist jedoch von der Zahlung der Gebühr befreit. Auslagen sind in Höhe von 264,00 Euro entstanden. Dieser Betrag ist innerhalb von 4 Wochen auf ein Konto der Stadt Ansbach unter Angabe des Kassenzeichens 1091049-2024-244253 zu überweisen.

Gründe:
I.

1. Hintergrund der Maßnahmen ist eine Sickerwasser- und Grundwasserbelastung mit Per- und Polyfluorierten Alkylsubstanzen (PFAS) auf dem Areal der US-Kaserne Katterbach im Bereich eines ehemaligen Feuerlösch-Übungsplatzes auf dem Flughafengelände in Katterbach („CCAN104“) sowie aus dem Umfeld vom Gebäude 5801 („CCAN126“). In den Gutachten zu dem PFC-Schaden der Fa. AECOM vom 07.06.2023 und 12.06.2023 wurde eine Sanierungsplanung vorgelegt, die das Abströmen von mit PFAS belastetem Grund- und Sickerwasser aus dem Kasernengelände verhindert und eine weitere Ausbreitung der Schadstoffe unterbinden soll. Die Stadt Ansbach hat mit Schreiben vom 21.06.2023 Einverständnis zum Vorschlag der hydraulischen Abstromsicherung mit Sanierungsanlage gegeben. Für die Entnahme, Behandlung und den Abschlag des gereinigten Grundwassers über die Einleitstelle E4 in das Oberflächengewässer Katterbach ist eine wasserrechtliche Erlaubnis erforderlich.
Die Maßnahme umfasst den Abschlag von gereinigtem Grund- und Sickerwasser der beiden Grundwasserreinigungsanlagen „TS2“ und „TS3“, die im Rahmen der geplanten Abstromsicherung errichtet werden. Der Standort für die geplanten Reinigungsanlagen befindet sich nördlich des Gebäudes 5801 zwischen den beiden Regenrückhaltebecken.
Die bereits errichteten Grundwassermessstellen werden mit Fördertechnik ausgebaut und an ein Entwässerungssystem mit Druckleitungen für die Förderung von kontaminierten Grund- und Sickerwasser angeschlossen. Ein Leitungsnetzwerk wird das geförderte Wasser zur Reinigungsanlage TS3 in ca. 600 m Entfernung führen. Es ist eine Gesamtförderrate für die Reinigungsanlage TS3 von bis zu rund 51 m³/Tag zu erwarten. Dies entspricht einer Rate von rund 0,6 l/s an abgereinigtem Wasser aus CCAN104, das in den Katterbach eingeleitet wird.
Ebenfalls soll das Dränwasser im Umfeld von Gebäude 5801 über die separate Reinigungsanlage TS2 behandelt werden. Das ermittelte Gesamtvolumen an Dränwasser für die Behandlung in der Reinigungsanlage TS2 beträgt durchschnittlich rund 12 l/min (17,3 m³/Tag) bis maximal rund 60 l/min (86,4 m³/Tag). Dies entspricht einer Durchflussrate zwischen rund 0,2 l/s bis 1,0 l/s an abgereinigtem Wasser, das in den Katterbach eingeleitet wird.
Das geförderte und abgereinigte Grundwasser soll über das bestehende Regenwasserkanalnetz über Schacht 105009A und die Einleitstelle E 4 (Fl.Nr. 1178, Gmkg. Hennenbach) in den Katterbach abgeleitet werden.
Die Maßnahme ist vorerst für den Zeitraum 09/2024 bis 09/2027 vorgesehen.

Mit Schreiben vom 26.04.2024 beantragte die [redacted], für die vorgesehenen Gewässerbenutzungen bei der Stadt Ansbach – Umweltamt (Untere Wasserrechtsbehörde) die Erteilung einer beschränkten Erlaubnis nach Art. 15 BayWG.
Die Planunterlagen wurden vom beauftragten [redacted], erstellt.

2. Das Wasserwirtschaftsamt Ansbach als amtlicher Sachverständiger erstellte zu den eingereichten Antragsunterlagen am 05.07.2024 ein Gutachten.

II.

1. Die Stadt Ansbach als untere Wasserrechtsbehörde ist für den Erlass dieses Bescheids sachlich (Art. 63 Abs. 1 Satz 2 BayWG) und örtlich (Art. 3 Abs. 1 Nr. 1 BayVwVfG) zuständig.

2. Das zu Tage fördern bzw. Entnehmen von PFC-belasteten Grundwasser aus Grundwasserentnahmebrunnen und Grundwassermessstellen, dessen anschließende Abreinigung in den beiden Reinigungsanlagen TS2 und TS3 sowie das Einleiten des abgereinigten Grundwassers über die vorhandene Einleitungsstelle E4 in das Gewässer Katterbach (Gewässer III. Ordnung) stellen Gewässerbenutzungen nach § 9 Abs. 1 Nrn. 5 und 4 WHG dar, die gemäß § 8 Abs. 1 i. V. m. § 10 Abs. 1 WHG der wasserrechtlichen Erlaubnis bedürfen.

   Die wasserrechtliche Erlaubnis ist gemäß § 12 Abs. 1 Nr. 1 und Nr. 2 WHG zu versagen, wenn schädliche, auch durch Nebenbestimmungen nicht vermeidbare oder nicht ausgleichbare Gewässerveränderungen zu erwarten sind und andere Anforderungen nach öffentlich-rechtlichen Vorschriften nicht erfüllt werden.

   a) Schädliche Gewässerveränderungen
   Schädliche Gewässerveränderungen sind Veränderungen von Gewässereigenschaften, die das Wohl der Allgemeinheit, insbesondere die öffentliche Wasserversorgung, beeinträchtigen oder die nicht den Anforderungen entsprechen, die sich aus dem Wasserhaushaltsgesetz, auf Grund dieses Gesetztes erlassenen oder aus sonstigen wasserrechtlichen Vorschriften ergeben, § 3 Nr. 10 WHG. Bei Einhaltung der in Nr. 1.2 genannten Inhalts- und Nebenbestimmungen sind keine schädlichen Auswirkungen auf die Grundwasserbeschaffenheit des Grundwassers und des oberirdischen Gewässers zu erwarten.

   b) Andere Anforderungen nach öffentlich-rechtlichen Vorschriften
   Im vorliegenden Fall ergeben sich keine weiteren Anforderungen nach anderen öffentlich-rechtlichen Vorschriften (§ 12 Abs. Nr. 2 WHG).

   c) Wasserwirtschaftliches Bewirtschaftungsermessen
   Die beantragten Gewässerbenutzungen stehen den Bewirtschaftungszielen für das Grundwasser sowie für das oberirdische Gewässer nicht entgegen (§ 12 Abs. 2 WHG i. V. m. §§ 27 Abs. 1 Nr. 1 und 47 Abs. 1 WHG).

   Die allgemeinen Grundsätze einer nachhaltigen Gewässerbewirtschaftung gemäß § 6 Abs. 1 WHG werden beachtet.
   Die öffentliche Trinkwasserversorgung ist nicht betroffen.

   Da vom Unternehmensträger eine beschränkte Erlaubnis beantragt wurde, war nur diese zu erteilen (Art. 15 Abs. 1 BayWG).

   <u>Rechtsfolge Ermessen</u>
   Die Erteilung der beschränkten Erlaubnis steht im pflichtgemäßen Ermessen der unteren Wasserrechtsbehörde der Stadt Ansbach.

Das Interesse des Unternehmensträgers liegt in der Durchführung einer Grundwasser-Abstromsicherung zur Förderung und anschließenden Abreinigung von PFC-belasteten Grundwassers auf dem Kasernengelände und Einleitung des abgereinigten Grundwassers in das oberirdische Gewässer Katterbach. Das Interesse der Allgemeinheit liegt darin das Grundwasser und das oberirdische Gewässer vor schädlichen Einflüssen und nachteiligen Veränderungen zu schützen. Bei Einhaltung der in Nr. 1.2 genannten Inhalts- und Nebenbestimmungen sind keine schädlichen Gewässerveränderungen zu besorgen. Das Interesse des Unternehmensträgers kann daher schwerer gewichtet und die Erlaubnis erteilt werden.

3. Zur Vermeidung nachteiliger Beeinträchtigungen durch die Gewässerbenutzungen wurden Inhalts- und Nebenbestimmungen in den Bescheid aufgenommen (§ 13 Abs. 1 WHG).

- Die Erlaubnis wurde entsprechend der vorgesehenen Dauer der Maßnahme bis 31.12.2027 befristet (Art. 36 Abs. 2 Nr. 1 BayVwVfG).

- Die Auflagen zur Anzeige- und Informationspflicht sind notwendig um eine rechtzeitige Unterrichtung der Behörden und ggf. sonstiger Beteiligter über den aktuellen Stand bzw. Fortlauf der Maßnahme zu gewährleisten.

- Getroffene Auflagen in Bezug auf den Betrieb, die baulichen Ausführungen sowie die Verwendung und der Umgang mit wassergefährdenden Stoffen, dienen zur Vermeidung von nachteiligen Wirkungen auf das genutzte Grundwasser und das oberirdische Gewässer.

- Mittels der vorzulegenden Dokumentation und des durchzuführenden Monitorings ist die Überprüfung und Überwachung der Auswirkungen, welche von dem Vorhaben ausgehen, möglich.

Die Festsetzung der im Bescheid enthaltenen Inhalts- und Nebenbestimmungen steht im pflichtgemäßen Ermessen (Art. 40 BayVwVfG) der unteren Wasserrechtsbehörde der Stadt Ansbach.

Diese sind möglich und geeignet bei bescheidgemäßer Umsetzung schädlichen Gewässerveränderungen entgegen zu wirken. Sie sind erforderlich, da keine milderen Mittel ersichtlich sind.

Zudem ist die Festsetzung der Inhalts- und Nebenbestimmungen im Bescheid auch angemessen, da diese im Interesse der Allgemeinheit ergehen. Das Interesse der Allgemeinheit besteht im Schutz des Grundwassers sowie des oberirdischen Gewässers vor schädlichen Gewässerveränderungen. Das Interesse des Unternehmensträgers liegt darin, zunächst über einen Zeitraum von 3 Jahren, PFC-belastetes Wasser zu Tage zu fördern, Abzureinigen und in ein oberirdisches Gewässer einzuleiten.
Das Allgemeininteresse am Schutz des Grundwassers sowie des oberirdischen Gewässers überwiegt daher das Interesse des Unternehmensträgers, weshalb die Inhalts- und Nebenbestimmungen im Bescheid festgesetzt wurden.

4. Kostenentscheidung

Für diesen Bescheid werden keine Gebühren erhoben (vgl. Art. 1, Art. 2 und Art. 4 Abs. 2 KG). Die entstandenen Auslagen für das Gutachten des amtlichen Sachverständigen sind nach Art. 10 Abs. 1 Nr. 5 KG zu erheben.

Hinweise:

1. Für die erlaubten Gewässerbenutzungen sind die einschlägigen Vorschriften des Wasserhaushaltsgesetzes (WHG) und des Bayer. Wassergesetzes (BayWG) mit den dazu ergangenen Verordnungen maßgebend. Die hiernach bestehenden Rechte, Verpflichtungen und Vorbehalte sind in den Inhalts- und Nebenbestimmungen dieses Bescheids grundsätzlich nicht enthalten.

2. Die beschränkte Erlaubnis ist kraft Gesetzes widerruflich (§ 18 Abs. 1 WHG).

3. Inhalts- und Nebenbestimmungen können gemäß § 13 Abs. 1 WHG auch nachträglich festgesetzt werden (gesetzlicher Auflagenvorbehalt).

4. Es besteht eine Gefährdungshaftung für Gewässerschäden, die durch den Unternehmensträger verursacht werden, auch wenn kein schuldhaftes Verhalten vorliegt (§ 89 WHG).

5. Die in diesem Bescheid verwendeten Abkürzungen haben folgende Bedeutung:

| | |
|---|---|
| BayVwVfG | -Bayer. Verwaltungsverfahrensgesetz vom 23.12.1976 (BayRS 2010-1-I) |
| WHG | -Gesetz zur Ordnung des Wasserhaushalts (Wasserhaushaltsgesetz) vom 31.07.2009 (BGBl S. 2585) |
| BayWG | -Bayer. Wassergesetz vom 25.02.2010 (GVBl 2010 S. 66) |
| KG | -Kostengesetz i. d. F. der Bekanntmachung vom 20.02.1998 (BayRS 2013-1-1-F) |

Rechtsbehelfsbelehrung

Die gegen diesen Bescheid zulässigen Rechtsbehelfe sind der beigefügten Rechtsbehelfsbelehrung zu entnehmen. Diese ist Bestandteil des Bescheides.

gez. Unterschrift
[redacted]

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[redacted]

# Anhang G Wartungsprotokolle TS3

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: _____ Uhrzeit: _____

Arbeitskraft [redacted] Temperatur: _____ °C(außen)

Witterung: _____ Temperatur: _____ °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ja nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

_____

_____

_____

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | / | / | | | | | |
| GWM37 | P202.01 | / | / | | | | | |
| GWM91 | P203.01 | / | / | | | | | |
| GWM90 | P204.01 | / | / | | | | | |
| GWM78A | P205.01 | / | / | | | | | |
| GWM86 | P206.01 | / | / | | | | | |
| GWM89 | P207.01 | / | / | | | | | |
| GWM88 | P208.01 | / | / | | | | | |
| GWM87 | P209.01 | / | / | | | | | |

Bemerkungen zu den Schächten:

_____

_____

# Wartungsprotokoll
**Grundwasserreinigung**
# 579DGDM Katterbach - Anlage TS3



[redacted]

## 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | | |

## 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ja / nein | |
| | Störung | | ja /nein | |
| NE210.01 | Frequenz | Hz | | |

## 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | | |

## 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | | |

## 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | | |
| PM223.01 | Druck | bar | | |
| PM224.01 | Druck | bar | | |
| FE220.01 | Durchfluss | $m^3/h$ | | |

## 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | Ja / nein |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | i.O. | n.i.O. | behoben |
| Sichtprüfung Komponenten: | i.O. | n.i.O. | behoben |

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

Unterschrift Arbeitskraft

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

**Grundwasserreinigung Brunnen B 30, B24, B XII**

| Brunnenpumpe | | B30 | B 24 | B XII | Bemerkung |
|---|---|---|---|---|---|
| Betrieb | | ja / nein | ja / nein | ja / nein | |
| Störung | | ja / nein | ja / nein | ja / nein | |
| Durchsatzmenge | [ l/s ] | | | | |
| Gesamt | [ m³ ] | | | | |
| **Ventilator Strippung** | | **V** | **Bemerkung** | | |
| Betrieb | | ja / nein | | | |
| Störung | | ja / nein | | | |
| Riementrieb | Geprüft | IO / nicht iO | | | |
| Laufgeräusch | Geprüft | IO / nicht iO | | | |
| Ansauggitter | Gereinigt | ja / nein | | | |

| Dosierung Polystabil | | | Bemerkung |
|---|---|---|---|
| Betrieb | ja / nein | | |
| Dosiermenge | ml/h | | |
| Füllstand | cm | | |

| Luftstrom Kolonne | | Kolonne 1 | | |
|---|---|---|---|---|
| | | m³/h | | |

| Aktivkohlefilter | | AKF 1 | AKF 2 | Bemerkung |
|---|---|---|---|---|
| Druck | [ bar ] | | | |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | □ i.O. | □ n.i.O. | □ behoben |
| Sichtprüfung Komponenten: | □ i.O. | □ n.i.O. | □ behoben |
| Mtl. Prüfung | | | |
| FI-Schutz (RCD) | □ i.O. | □ n.i.O. | □ behoben |
| Störmeldemodem getestet | □ i.O. | □ n.i.O. | □ behoben |

Sonstiges / Bemerkungen:

_____

_____

_____

_____
Unterschrift Arbeitskraft

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3


[redacted]

Datum: _____ Uhrzeit: _____

Arbeitskraft [redacted] Temperatur: _____ °C(außen)

Witterung: _____ Temperatur: _____ °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ja nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

_____

_____

_____

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | / | / | | | | | |
| GWM37 | P202.01 | / | / | | | | | |
| GWM91 | P203.01 | / | / | | | | | |
| GWM90 | P204.01 | / | / | | | | | |
| GWM78A | P205.01 | / | / | | | | | |
| GWM86 | P206.01 | / | / | | | | | |
| GWM89 | P207.01 | / | / | | | | | |
| GWM88 | P208.01 | / | / | | | | | |
| GWM87 | P209.01 | / | / | | | | | |

Bemerkungen zu den Schächten:

_____

_____

# Wartungsprotokoll
**Grundwasserreinigung**
# 579DGDM Katterbach - Anlage TS3



[redacted]

## 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | | |

## 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ja / nein | |
| | Störung | | ja /nein | |
| NE210.01 | Frequenz | Hz | | |

## 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | | |

## 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | | |

## 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | | |
| PM223.01 | Druck | bar | | |
| PM224.01 | Druck | bar | | |
| FE220.01 | Durchfluss | $m^3/h$ | | |

## 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | Ja / nein |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | i.O. | n.i.O. | behoben |
| Sichtprüfung Komponenten: | i.O. | n.i.O. | behoben |

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

Unterschrift Arbeitskraft

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

**Grundwasserreinigung Brunnen B 30, B24, B XII**

| Brunnenpumpe | | B30 | B 24 | B XII | Bemerkung |
|---|---|---|---|---|---|
| Betrieb | | ja / nein | ja / nein | ja / nein | |
| Störung | | ja / nein | ja / nein | ja / nein | |
| Durchsatzmenge | [ l/s ] | | | | |
| Gesamt | [ m³ ] | | | | |
| **Ventilator Strippung** | | **V** | **Bemerkung** | | |
| Betrieb | | ja / nein | | | |
| Störung | | ja / nein | | | |
| Riementrieb | Geprüft | IO / nicht iO | | | |
| Laufgeräusch | Geprüft | IO / nicht iO | | | |
| Ansauggitter | Gereinigt | ja / nein | | | |

| Dosierung Polystabil | | | Bemerkung |
|---|---|---|---|
| Betrieb | ja / nein | | |
| Dosiermenge | ml/h | | |
| Füllstand | cm | | |

| Luftstrom Kolonne | | Kolonne 1 | | |
|---|---|---|---|---|
| | | m³/h | | |

| Aktivkohlefilter | | AKF 1 | AKF 2 | Bemerkung |
|---|---|---|---|---|
| Druck | [ bar ] | | | |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | □ i.O. | □ n.i.O. | □ behoben |
| Sichtprüfung Komponenten: | □ i.O. | □ n.i.O. | □ behoben |
| Mtl. Prüfung | | | |
| FI-Schutz (RCD) | □ i.O. | □ n.i.O. | □ behoben |
| Störmeldemodem getestet | □ i.O. | □ n.i.O. | □ behoben |

Sonstiges / Bemerkungen:

_____

_____

_____

_____
Unterschrift Arbeitskraft

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 20.12.2024 Uhrzeit: 12

Arbeitskraft [redacted] Temperatur: 3 °C(außen)

Witterung: bewölkt Temperatur: 18 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,929 | 1407 | | 36 | 7,40 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,308 | 649 | | 40,1 | 0,20 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 25 | | 0 | 0,18 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 25 | | 0 | 0,03 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 83 | | 0 | 0,23 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 29 | | 0 | 0,01 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | | 0 | 0,00 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | 0 | 2 | | 0 | 0,17 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | | 0 | 0,01 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,501 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 22,2 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,52 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,41 | |
| PM223.01 | Druck | bar | 0,24 | |
| PM224.01 | Druck | bar | 0,11 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,246 | 2174$m^3$ |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

Unterschrift Arbeitskraft

versenden per Mail!

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 14.01.2025 Uhrzeit: 13.30

Arbeitskraft [redacted] Temperatur: -2 °C(außen)

Witterung: Sonnig Temperatur: 5 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt (●) ja ( ) nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,9 | 1936 | | 36,4 | 7,12 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,30 | 802 | | 34,5 | 1,07 |
| GWM91 | P203.01 | ☑ / ☐ | ☐ / ☑ | 0 | 27 | | 0 | 0,18 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 33 | | 0 | 0,13 |
| GWM78A | P205.01 | ☑ / ☐ | ☐ / ☑ | 0,35 | 96 | | 32 | 0,18 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 33 | | 0 | 0,10 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | | 0 | 0,18 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | 0 | 6 | | 0 | 0,11 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 25 | | 0 | 1.0 |

Bemerkungen zu den Schächten:

Gwm 90 und Gwm 91 waren die Kugelhähne zur Sammelleitung zu.

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,51 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 24,6 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,66 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,5 | |
| PM223.01 | Druck | bar | 0,3 | |
| PM224.01 | Druck | bar | 0,1 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,4 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

**Grundwasserreinigung**

## 579DGDM Katterbach - Anlage TS3



Sonstiges / Bemerkungen:

4 Schächte leer gepumpt. Stand Wasser drin

versenden per Mail!

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

**Grundwasserreinigung Brunnen B 30, B24, B XII**

| Brunnenpumpe | | B30 | B 24 | B XII | Bemerkung |
|---|---|---|---|---|---|
| Betrieb | | ja / nein | ja / nein | ja / nein | |
| Störung | | ja / nein | ja / nein | ja / nein | |
| Durchsatzmenge | [ l/s ] | | | | |
| Gesamt | [ m³ ] | | | | |
| **Ventilator Strippung** | | **V** | **Bemerkung** | | |
| Betrieb | | ja / nein | | | |
| Störung | | ja / nein | | | |
| Riementrieb | Geprüft | IO / nicht iO | | | |
| Laufgeräusch | Geprüft | IO / nicht iO | | | |
| Ansauggitter | Gereinigt | ja / nein | | | |

| Dosierung Polystabil | | | Bemerkung |
|---|---|---|---|
| Betrieb | ja / nein | | |
| Dosiermenge | ml/h | | |
| Füllstand | cm | | |

| Luftstrom Kolonne | | Kolonne 1 | | |
|---|---|---|---|---|
| | | m³/h | | |

| Aktivkohlefilter | | AKF 1 | AKF 2 | Bemerkung |
|---|---|---|---|---|
| Druck | [ bar ] | | | |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | □ i.O. | □ n.i.O. | □ behoben |
| Sichtprüfung Komponenten: | □ i.O. | □ n.i.O. | □ behoben |
| Mtl. Prüfung | | | |
| FI-Schutz (RCD) | □ i.O. | □ n.i.O. | □ behoben |
| Störmeldemodem getestet | □ i.O. | □ n.i.O. | □ behoben |

Sonstiges / Bemerkungen:

_____

_____

_____

_____
Unterschrift Arbeitskraft

# Baustellen – Tagesbericht

[redacted]

[redacted]

| | | | |
|---|---|---|---|
| **Baustelle/Projekt:** | 579DGDM USAG Katterbach | **Datum:** | 21.01.2025 |

| **Arbeitskräfte:** | | **Arbeitszeit** | | | **Pause** | **Gesamt** |
|---|---|---|---|---|---|---|
| **Name:** | [redacted] | **von** 7 | **bis** 13.30 | | 0,45 **h** | 6,5 **h** |
| **Name:** | | **von** 9.30 | **bis** 13.30 | | 0,45 **h** | 4 **h** |
| **Name:** | … | **von** | **bis** | | **h** | **h** |
| **Name:** | | **von** | **bis** | | **h** | **h** |

| | | | |
|---|---|---|---|
| **An-/ Abfahrt:** | **km** | **Fahrtzeiten:** | **h** |
| **Vor-/Nachbereitung:** | **h** | **Kennzeichen:** | M-EZ1080/ M-EZ114 |
| **Witterung:** | Sonnig | **Temperatur:** | -1 **°C** |

Materialverbrauch / eingesetzte Geräte - Maschinen

| | |
|---|---|
| 20 | Säcke IAT von Lanxess |
| | |
| | |
| | |

Ausgeführte Arbeiten:

Anlage TS 3 alle drei Filter gewechselt.

Material ging gut raus. War bräunlich aber nicht verbacken.

Material bewässert und später klar gespült .2x C Schlauch.

TS2 Anlage

Schachtpumpe gezogen und kontrolliert. Es war ein Stück Schnur oder so was in der

Richtig drin. Raus genommen und Pumpe wieder eingebaut. Läuft.

BECKENPUMPE hat genau das selbe Problem bzw. Sehr viele Feinanteile.

Abgebaut und mit genommen zur Reinigung.

Vorlagebecken muss vor wieder Inbetriebnahme gereinigt werden da da viele

Fein Anteile sich abgelagert haben.

Sonstiges / noch auszuführende Arbeiten

[redacted]

per Mail versenden!

verantwortliche Arbeitskraft

Auftraggeber

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 10.02.2025 Uhrzeit: 15

Arbeitskraft [redacted] Temperatur: 7 °C(außen)

Witterung: Sonnig Temperatur: 7 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,92 | 2490 | 0 | 36 | 7,1 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,29 | 937 | 0 | 35 | 0,48 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 31 | 0 | 0 | 0,15 |
| GWM90 | P204.01 | ☑ / ☐ | ☐ / ☑ | 0,12 | 38 | 0 | 0 | 0,05 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 37 | 0 | 0 | 0,2 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 96 | 0 | 0 | 0,01 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | 0 | 0 | 0,17 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | 0 | 15 | 0 | 0 | 0,14 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 25 | 0 | 0 | 0,010,5 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,5 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 20,5 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,4 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,29 | |
| PM223.01 | Druck | bar | 0,19 | |
| PM224.01 | Druck | bar | 0,08 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,28 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

**Grundwasserreinigung**

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

Schacht 92A gesucht und Eingemessen.

Schächte am Flugfeld kontrolliert.

Tauschpumpe Schacht S3 und Ersatz Zwischenpumpe  im Container gelas

[redacted]

Unterschrift Arbeitskraft

versenden per Mail!

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

**Grundwasserreinigung Brunnen B 30, B24, B XII**

| Brunnenpumpe | | B30 | B 24 | B XII | Bemerkung |
|---|---|---|---|---|---|
| Betrieb | | ja / nein | ja / nein | ja / nein | |
| Störung | | ja / nein | ja / nein | ja / nein | |
| Durchsatzmenge | [ l/s ] | | | | |
| Gesamt | [ m³ ] | | | | |
| **Ventilator Strippung** | | **V** | **Bemerkung** | | |
| Betrieb | | ja / nein | | | |
| Störung | | ja / nein | | | |
| Riementrieb | Geprüft | IO / nicht iO | | | |
| Laufgeräusch | Geprüft | IO / nicht iO | | | |
| Ansauggitter | Gereinigt | ja / nein | | | |

| Dosierung Polystabil | | | Bemerkung |
|---|---|---|---|
| Betrieb | ja / nein | | |
| Dosiermenge | ml/h | | |
| Füllstand | cm | | |

| Luftstrom Kolonne | | Kolonne 1 | | |
|---|---|---|---|---|
| | | m³/h | | |

| Aktivkohlefilter | | AKF 1 | AKF 2 | Bemerkung |
|---|---|---|---|---|
| Druck | [ bar ] | | | |

**Anlagekontrolle**

| | | | |
|---|---|---|---|
| Sichtprüfung Dichtigkeit: | □ i.O. | □ n.i.O. | □ behoben |
| Sichtprüfung Komponenten: | □ i.O. | □ n.i.O. | □ behoben |
| Mtl. Prüfung | | | |
| FI-Schutz (RCD) | □ i.O. | □ n.i.O. | □ behoben |
| Störmeldemodem getestet | □ i.O. | □ n.i.O. | □ behoben |

Sonstiges / Bemerkungen:

_____

_____

_____

_____
Unterschrift Arbeitskraft

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 13.03.2025 Uhrzeit: 15.30

Arbeitskraft [redacted] Temperatur: 5 °C(außen)

Witterung: Bewölkt Temperatur: 5 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,9 | 3144 | | 35 | 7,4 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,3 | 1179 | | 35 | 0,52 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | | 42 | 0 | 0 | 0,22 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | | 50 | 0 | 0 | 0,14 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | | 107 | 0 | 0 | 0,16 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | | 47 | 0 | 0 | 0,01 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | | 24 | 0 | 0 | 0,2 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | | 31 | 00 | 0 | 0,19 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | | 26 | 00 | 0 | 0,01 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,5 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 20 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,4 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,3 | |
| PM223.01 | Druck | bar | 0,2 | |
| PM224.01 | Druck | bar | 0,1 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,24 | 4735m3 |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ◉ Ja / nein ○ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

Unterschrift Arbeitskraft

versenden per Mail!

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 10.04.2025 Uhrzeit: 14.15

Arbeitskraft [redacted] Temperatur: 12 °C(außen)

Witterung: Sonnig Temperatur: 10 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,9 | 3732 | 0 | 35,8 | 7,35 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,3 | 1472 | 0 | 34,7 | 0,74 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 42 | 0 | 0 | 0,04 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 51 | 0 | 0 | 0,14 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 110 | 0 | 0 | 0,22 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 47 | 0 | 0 | 0,01 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | 0 | 0 | 0,005 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | 0 | 43 | 0 | 0 | 0,12 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 36 | 0 | 0 | 0,01 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,49 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 20 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,4 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,28 | |
| PM223.01 | Druck | bar | 0,18 | |
| PM224.01 | Druck | bar | 0,07 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,25 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ◉ Ja / nein ○ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

**Grundwasserreinigung**

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

Ersatz Zwischenpumpe Vorort eingelagert

[redacted]

Unterschrift Arbeitskraft

versenden per Mail!

# Baustellen – Tagesbericht

[redacted]

[redacted]

| | | | |
|---|---|---|---|
| **Baustelle/Projekt:** | 579DGDM USAG Katterbach | **Datum:** | 28.04.2025 |

| **Arbeitskräfte:** | | **Arbeitszeit** | | | **Pause** | **Gesamt** |
|---|---|---|---|---|---|---|
| **Name:** | [redacted] | **von** 10.30 | **bis** 11 | | 0 **h** | 0,5 **h** |
| **Name:** | … | **von** | **bis** | | **h** | **h** |
| **Name:** | … | **von** | **bis** | | **h** | **h** |
| **Name:** | | **von** | **bis** | | **h** | **h** |

| | | | |
|---|---|---|---|
| **An-/ Abfahrt:** | km | **Fahrtzeiten:** | h |
| **Vor-/Nachbereitung:** | h | **Kennzeichen:** | M-ez1080 |
| **Witterung:** | Sonnig | **Temperatur:** | 12 °C |

Materialverbrauch / eingesetzte Geräte - Maschinen

| | |
|---|---|
| | |
| | |
| | |
| | |

Ausgeführte Arbeiten:

Probenahme, Nach Beutelfilter, Nach IAT 1, Nach IAT 2 und Reinwasser TS3 Container

Flaschen Vorort gelassen

4 Beutelfilter Vorort

10 Säcke Purolite 694 Vorort

Sonstiges / noch auszuführende Arbeiten

[redacted]

per Mail versenden!

verantwortliche Arbeitskraft

Auftraggeber

# Baustellen – Tagesbericht

[redacted]

[redacted]

| | | | |
|---|---|---|---|
| **Baustelle/Projekt:** | 579DGDM USAG Katterbach | **Datum:** | 05.05.2025 |

| **Arbeitskräfte:** | | **Arbeitszeit** | | | | **Pause** | | **Gesamt** | |
|---|---|---|---|---|---|---|---|---|---|
| **Name:** | [redacted] | **von** | 10.30 | **bis** | 15.30 | 0,5 | **h** | 5 | **h** |
| **Name:** | … | **von** | | **bis** | | | **h** | | **h** |
| **Name:** | … | **von** | | **bis** | | | **h** | | **h** |
| **Name:** | [redacted] | **von** | 10,30 | **bis** | 15.30 | 0,5 | **h** | 5 | **h** |

| | | | |
|---|---|---|---|
| **An-/ Abfahrt:** | km | **Fahrtzeiten:** | 1 h |
| **Vor-/Nachbereitung:** | h | **Kennzeichen:** | M-ez1080 |
| **Witterung:** | Bewölkt | **Temperatur:** | 10 °C |

Materialverbrauch / eingesetzte Geräte - Maschinen

| | |
|---|---|
| 19 | Sack Purolite 694 Ionentauscher Material (1 Sack á 25l) |
| | |
| | |
| | |

Ausgeführte Arbeiten:

Probenahme vor Ionentauscherwechsel. TS3

Alle 3 Filter gewechselt und mit neuen Purolite 694 befüllt.

Klargespült

Anlage mit Aktivkohle Filter wieder in Betrieb genommen

Sonstiges / noch auszuführende Arbeiten

[redacted]

per Mail versenden!

verantwortliche Arbeitskraft

Auftraggeber

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 21.05.2025 Uhrzeit: 11.30

Arbeitskraft [redacted] Temperatur: 22 °C(außen)

Witterung: sonnig Temperatur: 18 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☐ | 0,93 | 5084 | | 36 | 7,25 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☐ | 0,30 | 1903 | | 34,8 | 0,55 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 42 | | 0 | 0,018 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 51 | | 0 | 0,092 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 113 | | 0 | 0,213 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 47 | | 0 | 0,015 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | | 0 | 0,005 |
| GWM88 | P208.01 | ☑ / ☐ | ☑ / ☐ | 0,126 | 57 | | 30 | 0,178 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 26 | | 0 | 0,020 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,5 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 20 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,38 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0,30 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,27 | |
| PM223.01 | Druck | bar | 0,19 l | |
| PM224.01 | Druck | bar | 0,11 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,27 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

versenden per Mail!

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 26.06.2025 Uhrzeit: 13,15

Arbeitskraft [redacted] Temperatur: 23 °C(außen)

Witterung: Sonnig Temperatur: 16 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,93 | 6600 | | 35,9 | 6,95 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,29 | 2049 | | 30,8 | 0,53 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 42 | | 0 | 0,19 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 51 | | 0 | 0,09 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 114 | | 0 | 0,18 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 47 | | 0 | 0,015 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | | 0 | 0,10 |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | 0 | 66 | | 0 | 0,15 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 26 | | 0 | 0,020 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,49 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 18,6 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,33 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0,24 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,21 | |
| PM223.01 | Druck | bar | 0,15 | |
| PM224.01 | Druck | bar | 0,087 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,1 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

[redacted]

Unterschrift Arbeitskraft

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# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 16.07.2025

Uhrzeit: 14,45

Arbeitskraft [redacted]

Temperatur: 16 °C(außen)

Witterung: Bewölkt

Temperatur: 10 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,9 | 7446 | 0 | 36,2 | 6,7 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,3 | 2049 | 0 | 35.3 | 0,5 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | 0 | 42 | 0 | 0 | 0,08 |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | 0 | 51 | 0 | 0 | 0,03 |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | 0 | 114 | 0 | 0 | 0,14 |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | 0 | 47 | 0 | 0 | 0,01 |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | 0 | 24 | 0 | 0 | 0,005 |
| GWM88 | P208.01 | ☑ / ☐ | ☐ / ☑ | 0,12 | 69 | 0 | 30 | 0,11 |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | 0 | 26 | 0 | 0 | 0,02 |

Bemerkungen zu den Schächten:

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,5 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 19,7 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,3 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0,28 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,25 | |
| PM223.01 | Druck | bar | 0,17 | |
| PM224.01 | Druck | bar | 0,09 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,25 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ◉ Ja / nein ○ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3

[redacted]



Sonstiges / Bemerkungen:

12 Beutelfilter da gelassen

[redacted]

Unterschrift Arbeitskraft

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# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 05.12.2024 Uhrzeit: 12: 00

Arbeitskraft ... Temperatur: 20 °C(außen)

Witterung: sonnig Temperatur: 18 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,927 | | | 36,2 | 6,470 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,284 | | | 35,3 | 0,487 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | | | | | |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | | | | | |

Bemerkungen zu den Schächten:

Alle trocken

# Wartungsprotokoll
## Grundwasserreinigung
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,50 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 19,25 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,362 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0,228 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,200 | |
| PM223.01 | Druck | bar | 0,143 | |
| PM224.01 | Druck | bar | 0,079 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,13 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3



Sonstiges / Bemerkungen:

[redacted]

[redacted]

[redacted]

[redacted]

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# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3



[redacted]

Datum: 05.12.2024 Uhrzeit: 13:30

Arbeitskraft [redacted] Temperatur: 10 °C(außen)

Witterung: Starkregen Temperatur: 12 °C (Container)

**Wichtig:**
**Vor Durchführung der Arbeiten bzw. vor Einstieg in Schacht**

- Schacht Freimessung durchgeführt ○ ja ◉ nein, kein Einstige nötig!

**Allgemeine Kontrolle auf Funktion, Beschädigung, Undichtigkeiten, Störungsanzeigen, etc.**

**Betriebsparameter**

| Schacht | Pumpe | Betrieb | Störung | Durch-fluss | | Druck | Fre-quenz | Wasser-stand |
|---|---|---|---|---|---|---|---|---|
| | | ja / nein | ja / nein | $m^3/h$ | $m^3$ | bar | Hz | m |
| GWM70 | P201.01 | ☑ / ☐ | ☐ / ☑ | 0,90 | 8192 | | 36,2 | 6,27 |
| GWM37 | P202.01 | ☑ / ☐ | ☐ / ☑ | 0,35 | 2049 | | 35,3 | 0,31 |
| GWM91 | P203.01 | ☐ / ☑ | ☐ / ☑ | | 43 | | | |
| GWM90 | P204.01 | ☐ / ☑ | ☐ / ☑ | | 51 | | | |
| GWM78A | P205.01 | ☐ / ☑ | ☐ / ☑ | | 114 | | | |
| GWM86 | P206.01 | ☐ / ☑ | ☐ / ☑ | | 47 | | | |
| GWM89 | P207.01 | ☐ / ☑ | ☐ / ☑ | | 24 | | | |
| GWM88 | P208.01 | ☐ / ☑ | ☐ / ☑ | | 71 | | | |
| GWM87 | P209.01 | ☐ / ☑ | ☐ / ☑ | | 26 | | | |

Bemerkungen zu den Schächten:

alle Schächte trocken

# Wartungsprotokoll
**Grundwasserreinigung**
## 579DGDM Katterbach - Anlage TS3

[redacted]



### 1. Vorlagebehälter B210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| LE110.02 | Füllstand | m | 0,500,36 | |

### 2. Zwischenpumpe, Pumpe P210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| P210.01 | Betrieb | | ☑ ja / nein ☐ | |
| | Störung | | ☐ ja /nein ☑ | |
| NE210.01 | Frequenz | Hz | 18,63 | |

### 3. Beutelfilter F210.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE210.01 | Druck | bar | 0,36 | |

### 4. Aktivkohlefilter F221.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PE221.01 | Druck | bar | 0,28 | |

### 5. Ionenaustauscher F222.01; F223.01; F224.01

| Messstelle | Beschreibung | Einheit | Wert | Bemerkung |
|---|---|---|---|---|
| | | | | |
| PM222.01 | Druck | bar | 0,24 | |
| PM223.01 | Druck | bar | 0,17 | |
| PM224.01 | Druck | bar | 0,09 | |
| FE220.01 | Durchfluss | $m^3/h$ | 1,21 | |

### 6. Auffangwanne

| Messstelle | Aktiv? |
|---|---|
| | |
| LE210.01 | ○ Ja / nein ◉ |

**Anlagekontrolle**

| | | | | | | |
|---|---|---|---|---|---|---|
| Sichtprüfung Dichtigkeit: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |
| Sichtprüfung Komponenten: | ☑ | i.O. | ☐ | n.i.O. | ☐ | behoben |

# Wartungsprotokoll

## Grundwasserreinigung

## 579DGDM Katterbach - Anlage TS3





Sonstiges / Bemerkungen:

_____

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