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# DETAILED SITE INVESTIGATION

## 1100 Oxford Falls Road, Oxford Falls NSW

*Prepared for*

**Queenwood School for Girls Ltd**

30th September 2025

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# ABBREVIATIONS

| | |
|---|---|
| ADWG | Australian Drinking Water Guidelines |
| ANZECC | Australian and New Zealand Environment and Conservation Council |
| AST | Aboveground Storage Tank |
| BGL | Below Ground Level |
| BTEX | Benzene, Toluene, Ethyl benzene and Xylene |
| COC | Contaminants of Concern |
| DLWC | Department of Land & Water Conservation |
| DNR | Department of Natural Resources |
| DQOs | Data Quality Objectives |
| POEO | Protection of the Environment Operations |
| DSI | Detailed Site Investigation |
| EPA | Environment Protection Authority |
| ESA | Environmental Site Assessment |
| HIL | Health-Based Soil Investigation Level |
| LGA | Local Government Area |
| NEHF | National Environmental Health Forum |
| NEPC | National Environmental Protection Council |
| NEPM | National Environmental Protection Measure |
| NHMRC | National Health and Medical Research Council |
| OCP | Organochlorine Pesticides |
| OPP | Organophosphate Pesticides |
| PAH | Polycyclic Aromatic Hydrocarbon |
| PCB | Polychlorinated Biphenyl |
| PID | Photo Ionisation Detector |
| PQL | Practical Quantitation Limit |
| PSH | Phase Separated Hydrocarbon |
| PSI | Preliminary Site Investigation |
| QA/QC | Quality Assurance / Quality Control |
| RAC | Remediation Acceptance Criteria |
| RAP | Site Remediation Plan |
| RPD | Relative Percentage Difference |
| SAC | Site Assessment Criteria |
| SCID | Stored Chemical Information Database |
| SEPP | State Environment Planning Policy |
| SMP | Site Management Plan |
| SVC | Site Validation Criteria |
| TCLP | Toxicity Characteristics Leaching Procedure |
| TPH | Total Petroleum Hydrocarbons |
| TRH | Total Recoverable Hydrocarbons |
| UCL | Upper Confidence Limit |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compounds |
| VHC | Volatile Halogenated Compounds |

# EXECUTIVE SUMMARY

GSNE Services Pty Ltd ATF Aargus Engineering Trust ("Aargus Group") was appointed by Queenwood School for Girls Ltd (the 'client') to undertake a Detailed Site Investigation ('DSI') within the property located at 1100 Oxford Falls Road, Oxford Falls NSW (the 'site').

It is understood that the site is proposed for the redevelopment into Sport and Recreational Facilities and educational establishment including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas.

A site investigation was requested by the client to determine the potential for onsite contamination to support the Planning Secretary's Environmental Assessment Requirements (SEARs), in particular *Section 16 - Contamination and Remediation* (Application number: SSD-73688210, dated 26th July 2024).

At the time of the inspection (9th October 2024), the site was used for residential purposes and comprised of a double storey residential building with tile roof and brick walls, concrete driveway, garage with brick walls and metal roof, a swimming pool, a single storey residential building with wooden walls and metal roof, a cubby house, a tennis court at the western portion of the site, a creek at the central portion of the site and two metal shed and a horse stable at the eastern portion of the site.

Land title information provided suggested that the site was first granted to Rural Reconstruction Board then acquired by private individuals since 1970. In 2024, the site was transferred to the current owner Queenwood School for Girls LTD.

The land use of the site appeared to have been residential from at least 1943 with few structures in the western half of the site and vacant land in the eastern half. From 1970 the structures at the western portion decreased gradually and by 1991 the western half of the site was redeveloped into two residential buildings, a swimming pool and a garage. The layout of the site remained unchanged since then.

The general land use of the surrounding area has been predominantly residential, with a mix of commercial and market garden areas from 1943 to 1982. From 1991 to 2024, commercial development was observed to increase, particularly in the northern and western areas, while residential properties continued to expand south and east of the site.

The desktop study identified some areas of potential environmental concern, in relation to imported fill of unknown origin, previous site uses, leaks of motor vehicles, past use of adjoining properties and potential presence of hazardous materials in current or past building structures, which may pose risks to human and environmental receptors.

The soil assessment revealed the following:

- Heavy metals concentrations were below the HIL 'A' with the exception of:
  - The lead concentration in the sample BH10 (0.0-0.1m).
  - The lead concentration in the sample BH11 (0.0-0.1m).
  - The lead concentration in the sample BH12 (0.0-0.1m).
- Heavy metals concentrations were below the site derived EILs with the exception of:
  - The copper concentration in the sample BH10 (0.0-0.1m).
  - The copper concentration in the sample BH11 (0.0-0.1m).
  - The copper concentration in the sample BH12 (0.0-0.1m).
  - The lead concentration in the sample BH11 (0.0-0.1m).
  - The zinc concentration in the sample BH10 (0.0-0.1m).
  - The zinc concentration in the sample BH11 (0.0-0.1m).
  - The zinc concentration in the sample BH12 (0.0-0.1m).
- TRH and BTEXN concentrations were below the HSL 'A&B', ESLs and/or Management Limits, with the exception of:
  - The benzo(a)pyrene concentration in the sample BH12 (0.0-0.1m).
- PAH, OC & PCB concentrations were below the HIL 'A', EILs and/or ESLs with the exception of:
  - The benzo(a)pyrene concentration in the sample BH12 (0.0-0.1m).

Asbestos was not detected in any of the samples analysed, with the exception of:

- Chrysotile & Amosite Asbestos detected in the sample BH10 (0.0-0.1m).

- Chrysotile & Amosite Asbestos detected in the sample BH11 (0.0-0.1m).
- Chrysotile & Amosite Asbestos detected in the sample BH12 (0.0-0.1m).
- Chrysotile & Amosite Asbestos detected in the sample BH12 (0.0-0.1m).
- Chrysotile & Amosite Asbestos detected in the sample BH15 (0.0-0.1m).
- Chrysotile, Amosite & Crocidolite Asbestos detected in the sample BH17 (0.0-0.1m).

The hotspots are located in the area of the site where numerous boats were previously parked, therefore, this area is required to be investigated further to determine the extent of potential contamination associated with this activity.

Reference should be made to Figure 9 in Appendix A for the area of concern.

Upon completion of the site investigation and laboratory analysis, the soil assessment revealed the following analytes and respective locations which exceeded the SAC:

- Copper, Lead, Zinc & Asbestos in BH10
- Copper, Lead, Zinc & Asbestos in BH11
- Copper, Lead, Zinc, BaP & Asbestos in BH12
- Asbestos in BH15
- Asbestos in BH17

Based on the results of this investigation, it is considered that the risks to human health and the environment associated with soil contamination at the site are low within the context of the proposed use of the site for construction into Sport and Recreational Facilities and educational establishment including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas.

With reference to Clause 4.6 of the State Environmental Planning Policy (Resilience and Hazards) 2021, the site will be considered to be rendered suitable subject to the completion of a Remedial Action Plan (and after remediation and validation) for the proposed development.

It is recommended that further investigations are undertaken in the former boat storage area to determine the extent of potential contamination associated with this activity.

Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014).

*It should be noted that the area in the vicinity of the creek line, that being the creek and the embankments to the east and west, within the proposed Riparian Zone, could not be fully accessed, therefore there is a potential for buried fill and/or other potential environmental concerns in this area.*

If during the remaining site works, significant odours and / or evidence of gross contamination not previously detected are encountered, or any other significant unexpected occurrence, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

Appendix Q – Important information about your environmental site report should also be read in conjunction with this report.

This Detailed Site Investigation was prepared to support the Planning Secretary's Environmental Assessment Requirements (SEARs), in particular *Section 16 - Contamination and Remediation* (Application number: SSD-73688210, dated 26th July 2024).

# 1 INTRODUCTION

## 1.1 Background

GSNE Services Pty Ltd ATF Aargus Engineering Trust ("Aargus Group") was appointed by Queenwood School for Girls Ltd (the 'client') to undertake a Detailed Site Investigation ('DSI') within the property located at 1100 Oxford Falls Road, Oxford Falls NSW (the 'site'). The location of the property is presented in Figure 1 of Appendix A.

The project seeks to deliver new sport and recreation facilities directly associated with an existing 'School' (as defined), being Queenwood School for Girls, to enhance opportunities for students from the existing school campuses to train and compete in sport, as Queenwood currently does not own these types of school sporting facilities.

Specifically, the proposal will seek consent for:

- Demolition of existing structures on the site, along with tree removal.
- A change of use from residential to permit an educational establishment on the site.
- Excavation to accommodate a single basement level cut and fill to accommodate the development.
- Construction of a two-court indoor multipurpose hall that can accommodate basketball and netball with underground parking area. The building also includes associated amenities such as change rooms, and general learning areas.
- Construction of an elevated ramp connecting the indoor sports hall to the outdoor multipurpose pitch.
- Construction of an outdoor multipurpose pitch which can accommodate hockey, soccer and 12 tennis courts. The pitch will include a synthetic turf surface and flood lights to enable all season use.
- Car and bus parking and drop off areas, both internal and external the site within the road reserve.
- Associated amenities and ancillary services.
- The project is not intended to be staged.

- Landscaping and riparian improvement works, including a pedestrian bridge across the Creek and a detailed tree replacement planting strategy across the site.

The proposal will be undertaken in accordance with the Architectural Plans prepared by TKD Architects, with the relevant plans to this investigation found in Appendix B.

A site investigation was requested by the client to determine the potential for onsite contamination to support the Planning Secretary's Environmental Assessment Requirements (SEARs), in particular Section 16 - Contamination and Remediation (Application number: SSD-73688210, dated 26th July 2024), and with reference to the following (but not limited to) guidelines:

- NSW EPA (2020) "Guidelines for Consultants Reporting on Contaminated Sites".
- NSW EPA (2017, 3rd Edition) "Guidelines for the NSW Site Auditor Scheme".

Specifically, this report has been prepared to respond to the SEARs requirement relating to contamination as sumamrised in the table below:

| Item | Description of Requirement | Relevant Section of Report |
|---|---|---|
| 16. Contamination and Remediation | Provide a Contamination report that includes the following: | This report |
| | - Preliminary Site Investigation Report | Sections 2.0 to 5.0 |
| | - Detailed Site Investigation | Sections 6.0 to 15.0 |

## 1.2 Objective

The primary objectives of this DSI are as follows:

- Identify potential areas where contamination may have occurred from current and historical activities;
- Identify potential contaminants associated with potentially contaminating activities;
- Assess the potential for soils to have been impacted by current and historical activities; and
- Assess the suitability of the site for redevelopment into Sport and Recreational Facilities including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas based on its current condition and the findings of this investigation.

## 1.3 Scope of Works

The scope of works for this DSI includes:

- Review of the physical site setting and site conditions based on a site inspection, including research of the location of sewers, drains, holding tanks and pits, spills, patches of discoloured vegetation, etc. (where applicable);
- Research and review of the information available, including previous environmental investigations, historical titles information, review of aerial photographs, groundwater bore searches, EPA notices, anecdotal evidence, site survey and site records on waste management practices;
- Development of a preliminary Conceptual Site Model (CSM) to demonstrate the interactions between potential sources of contamination, exposure pathways and human/ecological receptors identified;
- A targeted soil boring/sampling investigative study – formulating and conducting a sampling plan and borehole investigation;

- Laboratory analysis and results from sample analysis – findings and comparison to regulatory guidelines;
- Field and laboratory Quality Assurance/Quality Control (QA/QC); and
- Recommendations for additional investigations should any data gaps be identified or possible strategies for the management of the site, where relevant.

This report was prepared with reference to the NSW Environment Protection Authority (EPA) "*Guidelines for Consultants Reporting on Contaminated Sites*" (2020).

# 2 SITE IDENTIFICATION AND DESCRIPTION

## 2.1 Site Identification

Site identification information and land use is summarised in the table below.

**Table 1: Site Identification**

| | |
|---|---|
| **Lot and DP Number (Address)** | Lot 1100 in DP814628 (1100 Oxford Falls Road, Oxford Falls NSW) |
| **Coordinates (SE corner) *** | Latitude: -33.741007, Longitude: 151.247747 |
| **Coordinates (SW corner) *** | Latitude: -33.740664, Longitude: 151.245269 |
| **Coordinates (NW corner) *** | Latitude: -33.739686, Longitude: 151.245464 |
| **Approx. Site Area** | 2.141 hectares |
| **Local Government Area** | Northern Beaches |
| **Parish** | Manly Cove |
| **County** | Cumberland |
| **Current Land Zoning**** | DM: Deferred Matter |
| **Proposed Land Use** | Educational facility – Sports and Recreational |
| **Current Site Owner** | Queenwood School for Girls Ltd |
| **Site End Users** | Teachers, Students, Workers, Visitors (adults & children) |

Notes: * refer to http://maps.six.nsw.gov.au/

** https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address

**https://eservices.northernbeaches.nsw.gov.au/ePlanning/live/Public/XC.Track/SearchProperty.aspx?id=126464

The site boundary and Lot and DP numbers are presented in Figure 2 of Appendix A.

## 2.2 Site Inspection

A site visit was carried out on the 9th October 2024 by an Aargus field scientist to inspect the site for any potential sources of contamination and document any observations made regarding the current site conditions. At the time of the site inspection, the following observations were made:

- The site was irregular in shape, with the western portion formerly used for residential purposes, the central portion by a creek and densely vegetated area, and the eastern portion currently being used as a horse agistment.
- The site boundaries were defined by wire metal fences along the eastern, western and southern boundaries, and a concrete wall and wire metal fences on the northern boundary.
- No surface standing water was noticed at the site, other than within the creek.
- No ASTs and/or USTs were observed within the site.

Western Portion

- The western portion of the site was accessed via Dreadnought Road along the northern site boundary.
- A concrete driveway was evident from the site entrance that led to the main dwelling (refer to Site Feature No.2 in Figure 3 in Appendix A and Site Photograph Nos. 1 & 2 in Appendix C).
- The main residential dwelling and attached garage was located in the south western portion and was constructed with bricks with a tile roof (refer to Site Feature Nos. 1 & 3 in Figure 3 in Appendix A and Site Photograph No. 5 in Appendix C).
- A swimming pool was located to the east of the main dwelling (refer to Site Feature No.4 in Figure 3 in Appendix A and Site Photograph No. 6 in Appendix C).
- A residential house with wooden walls and metal roof was located adjacent to the pool to the north (refer to Site Feature No.5 in Figure 3 in Appendix A and Site Photograph No. 6 in Appendix C). A cubby house was located adjacent to the pool to the north west (refer to Site Feature No.6 in Figure 3 in Appendix A and Site Photograph No. 4 in Appendix C).

- A synthetic tennis court was present in the central northern portion (refer to Site Feature No.7 in Figure 3 in Appendix A and Site Photograph No. 11 in Appendix C).
- The central portion was vacant with the ground surfaces appearing disturbed. This area previously contained numerous boats (refer to Site Feature No.13 in Figure 3 in Appendix A).
- A fill area was evident in the north western corner of the eastern half of the site (refer to Site Feature No.12 in Figure 3 in Appendix A).

Central Portion

- The central portion of the site was occupied by a creek and densely covered tree area.
- The water within the creek was observed without turbidity. However, overgrown vegetation was observed along the creek.
- This area was difficult to access for a full inspection.
- (refer to Site Feature No.8 in Figure 3 in Appendix A and Site Photograph No. 12 in Appendix C).

Eastern Portion

- The eastern portion of the site was accessed via Oxford Falls Road along the eastern site boundary.
- The majority of the eastern portion was open and vacant land and being used as a horse agistment (refer to Site Photograph Nos. 9 & 10 in Appendix C).
- Two metal sheds were observed around the centre of the eastern portion (refer to Site Feature No. 9 in Figure 3 in Appendix A and Site Photograph Nos. 10 in Appendix C).
- A horse stable was observed adjacent to the southern site boundary of the eastern portion of the site (refer to Site Feature No. 10 in Figure 3 in Appendix A).

The site features are presented in Figure 3 of Appendix A. Site photographs are included in Appendix C.

## 2.3 Topography and Surface Water Drainage

The following observations were made during the site inspection carried out on the 9th October 2024:

- The site topography is slightly sloping towards the centre of the site towards the creek, with Oxford Falls Road (along the eastern perimeter) slightly sloping to the north at approximately 5% slope, and Dreadnought Road (along the northern perimeter) sloping to the east at approximately 5% slope.
- Stormwater runoff from the site is expected to flow into the creek around the central portion of the site.

## 2.4 Surrounding Land Uses

The surrounding land uses identified are described in the table below:

**Table 2: Surrounding Land Uses**

| Orientation | Description |
|---|---|
| North | Dreadnought Road then Oxford Falls Grammar School |
| East | Commercial site with art gallery and horse stables. Further to the east is bush land. |
| South | Low density residential |
| West | A park then Wakehurst Parkway |

# 3 SITE HISTORY

## 3.1 Land Titles

A review of historical documents held at the NSW Department of Lands offices was undertaken to identify the current and previous landowners, and potential land uses. The results of the title search are summarised in the following table.

**Table 3: Land Title Information**

| Year | Lot 1100 in DP814628 (1100 Oxford Falls Road, Oxford Falls NSW) |
|---|---|
| 2024 - current | Queenwood School for Girls Ltd |
| 2004 - 2024 | Anthony NG, Joan NG, Nicholas NG & Kimberley NG ( Transfer AU359152) |
| 1994 - 2004 | Ross Charles Pitts (Transfer AB97053) |
| 1986 - 1994 | Veronica Margaret Pitts (Transfer U852897) |
| 1984 - 1986 | Anne Patricia Fulton (Transfer W613221) |
| **Prior Tittle (6670-129)** | |
| 1983 - 1984 | Robert Fulton & Anne Patricia Fulton |
| 1971 – 1983 | Arthur Barry Nesbitt |
| 1970 - 1971 | Edward Phillip Stoin, Lilian Mabel Covey & Winnifred Mary Blackett |
| 1953 - 1970 | Rural Reconstruction Board |

In summary, the land title information provided suggested that the site was first granted to Rural Reconstruction Board then acquired by private individuals since 1970. In 2024, the site was transferred to the current owner Queenwood School for Girls LTD.

A copy of the land titles information obtained by Aargus can be found in Appendix D.

## 3.2 Aerial Photographs

Selected aerial photographs obtained from the NSW Department of Lands were reviewed to describe the site features and surrounding areas at various timelines. A summary of the review is presented in the table below.

**Table 4: Summary of Historical Aerial Photos**

| Year | Site | Surrounding areas |
|---|---|---|
| 1943 | The site comprised a number of structures within the western half of the site that appeared residential in nature. The eastern half of the site was observed to be vacant. The central portion of the site was occupied by a creek running in a north-south direction. | N: Street then vacant land used potentially for agricultural activities.<br>S: Rural residential property & vacant land.<br>E: Street then vacant land<br>W: Residential property then street & agricultural activities (orchard). |
| 1970 | Decrease in the number of structures and increase in vegetation was observed within the western half of the site. | N: Street, then a large building has been constructed.<br>S: Rural residential property and market garden.<br>E: Street then a number of small buildings observed.<br>W: Residential property then street & commercial. |
| 1982 | The site layout appeared to be similar to that observed in the 1970 photo | No apparent changes were observed from the previous photo, with the exception of increase in the number of buildings towards the east and south. |
| 1991 | The residential structures within the western half of the site were redeveloped into two residential buildings, a swimming pool and a garage. | The commercial buildings towards the north and far west of the site were observed to have been demolished. |
| 2004 | The site layout appeared to be similar to that observed in the 1991 photo. | A commercial building was observed to have been constructed towards the north of the site. Increase in the number of residential building was observed towards the south of the site.<br>A park was observed to have been constructed towards the far west of the site. |
| 2024 | The site layout appeared to be similar to that observed in the 2004 photo, with numerous boats stored in the western portion of the site. | No apparent changes were observed from the previous photo, with the exception of redevelopment towards the east and south of the site. |

In summary, land use of the site appeared to have been residential from at least 1943 with few structures in the western half of the site and vacant land in the eastern half. From 1970 the structures at the western portion decreased gradually and by 1991 the western half of the site was redeveloped into two residential buildings, a swimming pool and a garage. The layout of the site remained unchanged since then.

The general land use of the surrounding area has been predominantly residential, with a mix of commercial and market garden areas from 1943 to 1982. From 1991 to 2024, commercial development was observed to increase, particularly in the northern and western areas, while residential properties continued to expand south and east of the site.

Copies of current and historical aerial photographs are presented in Appendix E.

## 3.3 EPA Records

### 3.3.1 Section 58, CLM Act 1997

The NSW EPA publishes records of contaminated sites under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act. However, it should be noted that the EPA record of Notices for Contaminated Land does not provide a record of all contaminated land in NSW.

A search of the EPA database revealed that the subject site is not listed, and no other sites listed within the suburb of Oxford Falls.

Copies of the EPA records are included in Appendix F.

### 3.3.2 Section 60, CLM Act

The NSW EPA also published records of the sites notified under Section 60 of the CLM Act. The published document as of the 8th October 2024 revealed that the site was not listed, and no other sites listed within the suburb of Oxford Falls.

Copies of the EPA records are included in Appendix F.

### 3.3.3 POEO Register

The NSW EPA also have a public register under section 308 of the Protection of the Environment Operations Act 1997 (the POEO Act) that contains the licensed premises.

A search of the EPA database revealed that the subject site is not listed, and no other sites listed within the suburb of Oxford Falls.

A copy of the POEO register search is included in Appendix F.

### 3.3.4 Unlicensed Premises Regulated by the NSW EPA

The NSW Environment Protection Authority (EPA) maintain records of the premises where the NSW EPA is still the Appropriate Regulatory Authority (ARA) that are no longer required to be licensed under the Protection of the Environment Operations Act 1997 (POEO Act).

A search of the EPA database revealed that the subject site is not listed, and no other sites listed within the suburb of Oxford Falls.

Copies of the EPA records are included in Appendix F.

## 3.4 NSW Government PFAS Investigation Program

A search of the EPA database revealed that the site is not listed on the NSW Government PFAS Investigation Program and/or the Contaminated Land Database. The nearest PFAS investigation site is Westleigh NSW Rural Fire Service located 16 km towards the west of the site.

Copies of the EPA database are attached in Appendix F.

There were no visible anthropogenic activities related to PFAS as described in Appendix B "*PFAS National Environmental Management Plan Version 2.0 - January 2020*" identified during the site history research and desktop study, therefore, PFAS were not considered a Contaminant of Concern.

## 3.5 Unexploded Ordnance

A review of the Department of Defence website for Unexploded Ordnance showed no records for the site.

Copies of the Department of Defence website are attached in Appendix F.

## 3.6 Naturally Occurring Asbestos

A review of the SafeWork NSW website showed that the site was not located in an area where naturally occurring asbestos might be located.

Copies of the SafeWork NSW website are attached in Appendix F.

## 3.7 Planning 10.7 Certificates

The Planning 10.7 Certificate – Section 149 (2) of the Environmental Planning & Assessment Act 1979 for the site was obtained by the client and provided to Aargus for review. A summary of the information pertaining to the site is provided below:

- Complying Developments under the Housing Code, Rural Housing Code, Low Rise Housing Diversity Code, Housing Alteration Code, General Development Code, Industrial and Business Alteration Code, Industrial and Business Building Code, Container Recycling Facilities Code, Subdivision Code, Demolition Code and Fire Safety Code may be carried out.
- The land is adjacent to Wakehurst Parkway (Conservation Areas).
- The property is not affected by road widening or road realignment under the Roads Act.
- The land is within the flood planning area and subject to flood related development controls.
- Some of the land is bush fire prone land.
- The land is not biodiversity certified land under part 8 of the *Biodiversity Conservation Act 2016.*
- The land is not within a proclaimed mine subsidence district.
- The land is not affected by one of the matters prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Copies of the certificates are included in Appendix G.

## 3.8 Industrial Processes and Products Manufactured

Based on the historical and land titles review, it is unlikely that these activities occurred at the site.

## 3.9 Former Chemical Storage and Transfer Areas

A review of the former chemical storage and transfer areas and/or products manufactured at the site was conducted, and it is unlikely that these activities occurred at the site.

## 3.10 Product Spill & Loss History

It was indicated by the client, that to their knowledge no serious land or water contamination had occurred. The majority of the site was vacant. No staining was observed and the vegetation was free of stress.

## 3.11 Discharges to Land, Water and Air

No major sign of discharge to the land, water and air was observed at the time of our inspection.

## 3.12 Complaint History

No complaints were registered for the site as advised by our client to the best of their knowledge.

## 3.13 Historical Use of Adjacent Land

It was indicated by the client that to their knowledge, the adjacent lands to the site have been used primarily for commercial, residential and agricultural purposes.

## 3.14 Discussion and Summary of Site History

Based on available information, the site historical usage is summarised as follows:

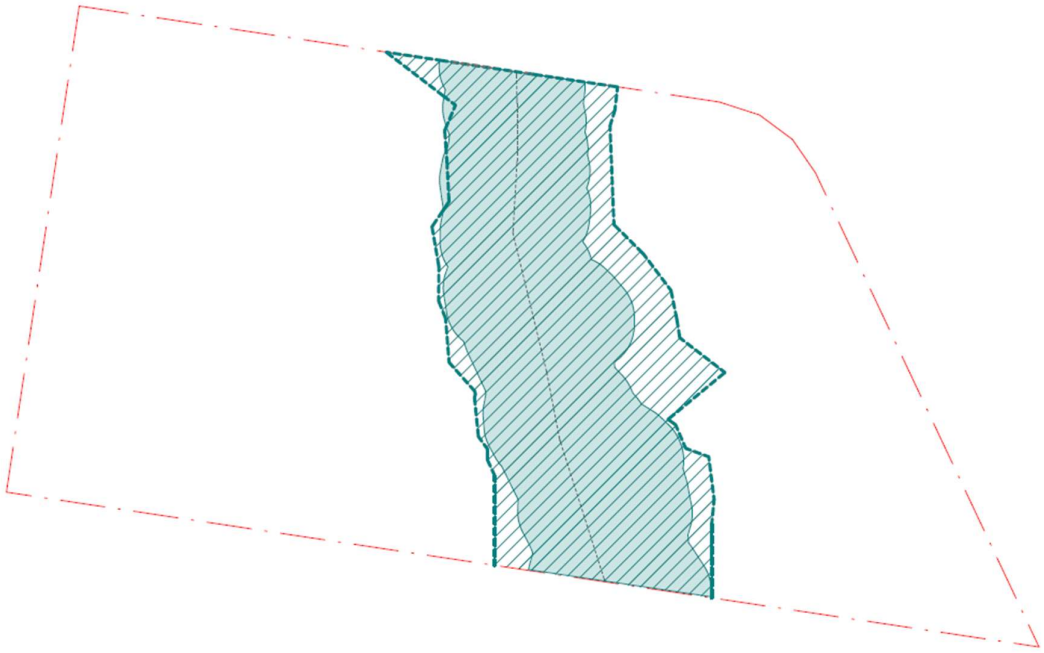
- Land title information provided suggested that the site was first granted to Rural Reconstruction Board then acquired by private individuals since 1970. In 2024, the site was transferred to the current owner Queenwood School for Girls Ltd.
- The land use of the site appeared to have been residential from at least 1943 with few structures in the western half of the site and vacant land in the eastern half. From 1970 the structures at the western portion decreased gradually and by 1991 the western half of the site was redeveloped into two residential buildings, a swimming pool and a garage. The layout of the site remained unchanged since then.
- The general land use of the surrounding area has been predominantly residential, with a mix of commercial and market garden areas from 1943 to 1982. From 1991 to 2024, commercial development was observed to increase, particularly in the northern and western areas, while residential properties continued to expand south and east of the site.
- The site is not listed in any of the EPA records.
- The land is not affected by one of the matters prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

# 4 ENVIRONMENTAL SETTING

## 4.1 Sensitive Environmental Receptors

The nearest down-gradient watercourse is a tributary of Middle Creek that travels in a north to south direction through the central portion of the site, with the main creek body located approximately 320m to the north west.

The site contains a riparian zone which runs north and south through the centre of the site. The riparian zone is mapped below:



The Verification of the Vegetation Riparian Zone (VRZ) is defined as a 10m zone either side of the high bank line.

## 4.2 Soil

The Soil Landscape Map of Sydney 9130, Scale 1:100,000, prepared by the Soil Conservation Service of NSW was reviewed. It indicates that the site is located within the Oxford Falls landscape area and compromise,

- Landscape - hanging valleys on Hawkesbury Sandstone. Local relief <80 m, slopes <15%.Occasional broad benches and broken scarps, valley floors are relatively wide, gently inclined and often poorly drained. Low eucalypt woodland, scrub, heathland and sedgeland.
- Soils - moderately deep to deep (50–>150 cm) Earthy Sands (Uc5.23), Yellow Earths (Gn2.84, Gn2.94), Siliceous Sands (Uc1.21) on slopes; deep (>200 cm) Leached Sands (Uc2.12), Podzols (Uc2.32, Uc2.36) and Grey Earths (Gn2.881) on valley floors.
- Limitations— very high soil erosion hazard, perched water tables and swamps, highly permeable soil, very low to low soil fertility, localised rock outcrop.

GSNE Services Pty Ltd ATF Aargus Engineering Trust prepared a "*Geotechnical Investigation Report*" (Ref: GS9402-1A, dated 1st November 2024), with the soil profile of the site comprising of a Silty Sand topsoil and Silty Clay fill material.

## 4.3 Geology

The Geological Map of Sydney (Geological Series Sheet 9130, Scale 1:100,000, 1983), published by the Department of Mineral Resources indicated the site is located in an area underlain by Middle Triassic Epoch Hawkesbury Sandstone, comprising medium to coarse grained quartz sandstone with very minor shale and laminate lenses.

GSNE Services Pty Ltd ATF Aargus Engineering Trust prepared a "*Geotechnical Investigation Report*" (Ref: GS9402-1A, dated 1st November 2024), with the geology beneath the site comprising of residual Clayey Sand underlain by Sandstone bedrock.

## 4.4 Acid Sulfate Soils

To determine whether there is a potential for acid sulphate soils to be present at the site, reference was made to the NSW Department of Land & Water Conservation (DLWC) *Acid Sulphate Soil Risk Maps* (Edition Two, December 1997, Scale 1:250,000), specifically Map No. 89 – "Hornsby/Mona Vale". A review of the map indicated that there is no known occurrence of Acid Sulphate Soil in the area.

## 4.5 Hydrogeology

Based on available information, our desktop study indicates that the inferred groundwater flow direction would be towards the north west, as shown in Figure 4 in Appendix A.

A search of the Department of Natural Resources (DNR) borehole database information revealed one (1) groundwater bore within a 500m radius of the site.

A summary of the relevant information provided by the registered groundwater bore record search is provided in the following table:

**Table 5: Summary of Registered Groundwater Bore Records**

| GW Bore ID | Approximate Location | Intended Purpose | Depth (m bgl) | Standing Water Level (m bgl) | Water Bearing Zones | Salinity (µS/cm) |
|---|---|---|---|---|---|---|
| GW108250 | 450m West | Recreation | 90 | 21 | 28-31, 44 – 44.50 | - |

GSNE Services Pty Ltd ATF Aargus Engineering Trust prepared a "*Geotechnical Investigation Report*" (Ref: GS9402-1A, dated 1st November 2024), with groundwater levels in the installed groundwater monitoring wells measured between 3.0m and 3.5m BGL.

A copy of the groundwater bore search records can be found in Appendix H.

## 4.6 Summary of Local Meteorology

The monthly rainfall of the local area can be represented by the data collected by Bureau of Meteorology (BOM) from the rainfall gauge located in Long Reef Golf Club, which is located approximately 5.7km east of the site. Records indicate that the mean rainfall for the month of October since 1961 is 64.4mm and the annual mean for all years of data is 1208.5mm.

Reference can be made to Appendix I – Local Meteorology.

# 5 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Based on the site inspection, site history, previous reports and review of available information from the desktop study, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Concern (CoC) for the site were identified. These are summarised in the following table.

**Table 6: Summary of Potential Areas and Contaminants of Concern**

| Potential AEC | Potentially contaminating activity | Potential CoCs | Likelihood of Site Impact | Justification |
|---|---|---|---|---|
| Entire site | Importation of fill material from unknown origin | Metals, TPH, BTEX, PAH, OCP, PCB, Asbestos | Low | Based on the site observations and site topography, the presence of imported fill material is likely to be minimal, with the exception of the north western corner of the eastern portion of the site (Site Feature No. 12). |
| | Potential for pesticides to have been sprayed or injected on or underneath concrete slabs | OCP | Low | The site is not known for having been used for agricultural purposes from the 1950s when OCPs were first introduced into Australia. If use of OCPs has occurred, the impact is likely to have been localised and limited to the topsoil layer. |
| Car parking | Leaks from vehicles | Metals, TPH, BTEX, PAH | Low | No significant hydrocarbon stains were observed on the site surfaces. |
| Past use of adjoining properties | Contamination of soils by migration of contaminants from adjoining market garden activities | Metals, OCP | Low | If this has occurred, the impact is likely to have been localised. The vegetation in within the site was found to be generally healthy. |
| Previous site uses | Potential for weathering / working on boats | Metals, TPH, BTEX, PAH, Asbestos | Low | Any impact is likely to have been localised and limited to the topsoil layer. |
| Building Structures | Potential Asbestos/Fibro Features | Asbestos | Low | If present, these will be removed by licensed contractors. |

# 6 DATA QUALITY OBJECTIVES

## 6.1 Step 1 – State the Problem

### 6.1.1 Problem Statement

The site is proposed to be developed into Sport and Recreational Facilities including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas. As part of the SSDA application, it is a SSDA requirement that a site investigation report be prepared by a consultant to assess whether the site is suitable for the proposed development.

However, the desktop study identified some areas of potential environmental concern, in relation to imported fill of unknown origin, previous site uses, leaks of motor vehicles, past use of adjoining properties and potential presence of hazardous materials in current or past building structures, which may pose risks to human and environmental receptors.

### 6.1.2 Objectives

The objectives of the DSI are:

- To assess the potential for the soils to have been impacted by current and historically contaminating activities.
- To assess the suitability of the site for redevelopment into Sport and Recreational Facilities including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas as part of DPHI requirements for the SSDA.

### 6.1.3 Project Team

The nominated core project team and their responsibilities are listed in the table below.

**Table 7: Project Team and Responsibilities**

| Project Team Member | Responsibilities |
|---|---|
| Mark Kelly – Principal Environmental Scientist | Project Director and Technical Review |
| Harsha Muthu – Environmental Engineer | Project Manager, Field Representative, Report Author |

### 6.1.4 Preliminary Conceptual Site Model

The preliminary CSM, based on the PSI, is summarised in the table below.

**Table 8: Conceptual Site Model**

| Potential Sources | Potential Receptor | Potential Exposure Pathways | Complete Linkages | Risk | Justification |
|---|---|---|---|---|---|
| Fill materials<br><br>Pesticide use<br><br>Former site activities<br><br>Leaks from vehicles | Site users or the general public | Dermal contact, inhalation or ingestion of exposed impacted soils | Limited (Current) | Low | The majority of the site is grassed covered. |
| | | | No (Future) | Negligible | If present, contaminated soils are likely to be remediated and removed for off-site disposal. |
| | The aquatic ecosystems on the creek on the site | Migration of impacted groundwater and surface water run-off | Yes (Current) | Low | No obvious sources of contamination were observed on site that could migrate off site with surface water run-off. |
| | | | No (Future) | Negligible | Any sources of contamination will be removed. |
| | Underlying Aquifer | Leaching and migration of contaminants through groundwater infiltration | Limited (Current) | Low | Due to concrete flooring leachability of metals and other contaminants is likely to be limited. |
| | | | No (Future) | Negligible | If present, contaminated soils are likely to be remediated & groundwater quality will improve if it was impacted. |
| Asbestos in current/former buildings | Site user or visitors | Inhalation of airborne fibres | Limited (Current) | Low | If present, they are likely to be in a bonded form. |

| Potential Sources | Potential Receptor | Potential Exposure Pathways | Complete Linkages | Risk | Justification |
|---|---|---|---|---|---|
| | | | No (Future) | Negligible | If present, contaminated soils are likely to be remediated. |

## 6.2 Step 2 - Identify the Decisions of the Study

The decisions required to address the contamination problem are as follows:

- Is soil contamination present within the areas of potential environmental concern identified?
- Is soil contamination likely to present an unacceptable risk of harm to humans or the environment?
- Is the site currently suitable for the proposed land use being residential with minimal access to soil?
- Is there a potential for onsite/offsite migration issues?
- If not, does the site require further investigation and/or remediation works?

## 6.3 Step 3 - Identify Information Inputs

The following information is required for input into the decisions identified in Step 2:

- Identification of potential areas and contaminants of concern as detailed in Section 6 of this report;
- Selection of soil assessment criteria from appropriate guidelines as detailed in Section 8 of this report;
- Collection of soil samples from site;
- Headspace analysis for screening of VOCs present within soils using a PID; and
- Comparison and interpretation of results again the adopted soil assessment criteria.

## 6.4 Step 4 – Define the Study Boundaries

The spatial and temporal aspects of the investigation area that the data must represent to support the decisions identified in Step 2 are as follows:

- The lateral extent of the study boundary is defined by the site boundaries as shown in the Site Location Plans (refer to Figure 1).
- The vertical extent of the study boundary is defined by the depth of the natural located at approximately 0.3 metres below the ground surface.

## 6.5 Step 5 – Develop the Analytical Approach

The acceptable limits for laboratory QA/QC parameters are shown in the table below and are based upon the laboratory reported acceptable limits and those stated within the NEPM 2013 Guidelines.

**Table 9: Acceptable Limits for QC Samples**

| Type of QC Sample | Control Limit |
|---|---|
| **FIELD** | |
| Rinsate Blanks | Analytes <LOR |
| Intra-Laboratory Duplicates | RPD's <50% |
| Inter-Laboratory Duplicates | RPD's <50% |
| Trip Blanks | Volatiles <LOR |
| Trip Spike Recovery | >70% |
| **LABORATORY** | |
| Method Blanks | < Laboratory LOR |
| Matrix Spike | Recovery targets:<br>• Metals: 70% to 130%<br>• Organics: 60% to 140% |
| Laboratory Duplicate | RPD's <30% |
| Laboratory Control Samples | Recovery targets: 60% to 140% |
| Surrogate Spike | Recovery targets: 60% to 140% |

The following conditions should be adopted:

- If the control limits are exceeded, then an assessment of the significance of the results should be carried out;
- If the results of the DQI assessment indicate that the data set is reliable, then the data set will be deemed to be acceptable for the purposes of the investigation; and
- If the measured concentrations of soil samples analysed meet their respective validation criteria, then no additional assessment is required is required.

## 6.6 Step 6 - Specify Limits on Decision Errors

There are two types of decision errors:

- **Sampling errors**, which occur when the samples collected are not representative of the conditions within the investigation area; and
- **Measurement errors**, which occur during sample collection, handling, preparation, analysis and data reduction.

These errors may lead to following (null hypothesis):

- Deciding that the site is not suitable for the proposed development when it actually is (Type I error).
- Deciding that the site is suitable for the proposed development when it is actually not (Type II error);.

A 5% significance level has been selected for Type I errors on the basis that 95% of the data set will satisfy the DQIs. Therefore, the acceptable limit of the decision errors is based on a 5% probability of the hypothesis being incorrect.

An assessment will be made as to the likelihood of a decision error being made based on:

- The acceptable limits for inter/intra laboratory duplicate sample comparisons as specified in Step 5 of the DQOs; and
- The acceptable limits for laboratory QA/QC parameters are based upon the laboratory reported acceptable limits and those stated within the NEPM Guidelines.

If the concentration of a particular contaminant of concern exceeds its assessment criteria, then a further assessment is required to address the significance of the result. Statistical analysis based on 95% UCL may be used to assess the significance of the data provided the following conditions are met:

- the arithmetic mean of the data set must be less than its respective threshold level; that is, it is acceptable for individual results to exceed its respective threshold level, but the cumulative mean of the data set of soil sample results must not exceed the threshold level;
- the standard deviation of the data set is less than 50% of the relevant threshold level; and
- no individual sample result should be greater than 250% of the relevant threshold level.

Ecological data is not included in this assessment process as ecological results cannot be statistically interpreted.

## 6.7 Step 7 - Optimise the Design for Obtaining Data

The optimum design for obtaining data in order to achieve the Data Quality Objectives is as follows:

- Only NATA-accredited environmental testing laboratories will be commissioned to analyse soil samples and will implement a quality control plan conforming to the NEPM (Assessment of Site Contamination) Measure Schedule B(3) Guidelines for Analysis of Potentially Contaminated Soils;
- An assessment of the Data Quality Indicators to determine if the field procedures and laboratory analytical results are reliable;
- The investigation will be carried out by an experienced and qualified Environmental Scientist, who is trained in sampling at contaminated sites in accordance with Aargus protocols based on best practice industry standards;
- Collection of QA/QC samples at frequencies prescribed in the NEPM Guidelines; and
- In accordance with the NSW EPA "Sampling Design Guidelines" (2022) a minimum of thirty-two (32) sampling points for a site area of 2.141 hectares will be adopted to provide general site coverage.

# 7 DATA QUALITY INDICATORS

## 7.1 General

The five Data Quality Indicators (DQIs) comprising completeness; comparability; representativeness; precision and accuracy provide an assessment of the reliability of field procedures and laboratory analytical results in accordance with the NEPM 2013 Schedule B2 Guidelines on Site Characterisation, Appendix C – Assessment of data quality. These are addressed in the following sub-sections.

## 7.2 Completeness

Data Completeness is a measure of the amount of useable data (expressed as %) from a data collection activity. The completeness is equal to the percentage of valid quality assurance and quality control results.

The assessment should address the following:

**Table 10: Data Completeness**

| Field | Laboratory |
|---|---|
| • All critical locations are sampled;<br>• All samples collected from critical grids and depths;<br>• Consistency in the use of standard operating procedures, equipment, sampler;<br>• Completion and correctness of field documentation. | • All critical samples and analytes are analysed in accordance with the DQOs;<br>• Appropriateness of laboratory methods and PQLs. |

The minimum target frequency for each type of QA/QC sample should be carried out in accordance with the following table:

**Table 11: QA/QC Requirements**

| Field QA/QC Sample | Frequency (Soil) |
|---|---|
| Intra-Laboratory Duplicate | 1 in 20 samples |
| Inter-Laboratory Duplicate | 1 in 20 samples |
| Field Blanks | 1 per day (rinsate) |
| Trip Blank | 1 per sample batch |
| Trip Spike | 1 per sample batch |

Where any of the above objectives are not achieved for particular samples, steps will be taken to rectify the non-conformance, if possible. Alternatively, data qualifiers detailing the nature of the quality problem will be documented in the report and attached to relevant data in the result summary tables.

The target for overall completeness for each data set is a minimum of 95%. A data completeness of less than 95% may be accepted where it can be justified that the non-conformance does not have a significant effect on the outcome of the results.

## 7.3 Comparability

Data Comparability is the confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

The qualitative assessment should address the following:

**Table 12: Data Comparability**

| Field | Laboratory |
|---|---|
| • Consistency in the use of standard operating procedures, equipment, sampler<br>• Consistency in the method of sample collection for each media<br>• Quantification of influence by climatic conditions | • Consistency of analytical methods and limits of reporting (LOR) for each analyte<br>• Whether laboratory limits of reporting are set at < 20% of the adopted site criteria value for each analyte<br>• Consistent use of one primary and one secondary laboratory |

## 7.4 Representativeness

Data Representativeness is the confidence (expressed qualitatively) that data are representative of each media present on the site.

The qualitative assessment should address the following:

**Table 13: Data Representativeness**

| Field | Laboratory |
|---|---|
| • Samples are collected in accordance with the DQOs<br>• Receipt of samples within holding times<br>• Receipt of intact samples<br>• Receipt of adequately preserved samples | • All samples are extracted and analysed within their respective holding times |

## 7.5 Precision

Data Precision is a quantitative measure of the variability (or reproducibility) of data.

Intra-laboratory or Inter-laboratory Duplicate Samples (B) results are compared with Primary Sample (A) results using Relative Percentage Differences (RPDs) according to the following formula:

$$\%RPD = \left|\frac{A - B}{A + B}\right| \times 200$$

Duplicate sampling rates for this assessment (**for each separate sample batch**) are to be tested for all the same analytes as the primary sample:

**Table 14: Data Precision**

| Type of QC Sample | Control Limit |
|---|---|
| Field Intra-Laboratory Duplicate (Blind) | RPD < +/- 50% |
| Field Inter-Laboratory Duplicate (Split) | RPD < +/- 50% |

Where the laboratory has reported results for a particular analyte below the limit of reporting for either the primary sample or a duplicate sample, the RPD is reported as 'Not Calculable' or NC. A discussion should be made as to which sample should be adopted and compared against the relevant assessment criteria. However, no discussion is required where both the primary sample and the duplicate sample for a particular analyte are below the limit of reporting.

## 7.6 Accuracy

Data Accuracy is a quantitative measure of the closeness of reported data to the true value. Laboratory measured recovery of analytes in lab control samples with known concentrations. Laboratory QA/QC testing is to include:

**Table 15: Data Accuracy**

| Laboratory QA/QC Sample | Frequency |
|---|---|
| Method Blank | 1 per 20 samples |
| Matrix Spike | 1 per 20 samples |
| Laboratory Duplicate | Laboratory defined |
| Laboratory Control | Laboratory defined |
| Surrogate Spike | All organic samples |

# 8 SITE INVESTIGATION AND SCREENING LEVELS

## 8.1 General

The selection of appropriate human health and ecological site assessment criteria were based on the "National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)", NEPC (2013). Full details of the site investigation and screening levels for each potential contaminant of concern in soils identified in Section 5 are presented in Appendix J.

## 8.2 Soils Investigation and Screening Levels

### 8.2.1 Health Investigation Levels (HILs)

The NEPM presents Tier 1 Health Investigation Levels (HILs) for a broad range of chemicals such as metals, inorganics, PAHs, phenols, pesticides and other organics. The HILs are applicable to generic land uses such as residential, commercial/industrial or public open space and all soil types, generally within the first 3 metres of soil below ground level. The HILs have been applied to assess human health risks via all relevant pathways of exposure.

Based on the proposed development, soil investigation results within the site will be assessed against the **HIL 'A' -** *Residential use with gardens/accessible soils, including children's day-care centres, preschools and primary schools*.

### 8.2.2 Petroleum Hydrocarbon Management Limits

Table 1B (7) of the NEPM presents petroleum hydrocarbon management limits for application to TPH fractions $C_6$-$C_{10}$, >$C_{10}$-$C_{16}$, >$C_{16}$-$C_{34}$ and >$C_{34}$-$C_{40}$. The management limits are applicable for coarse or fine soils in residential, parkland, public open space or commercial/industrial land uses following consideration of relevant ESLs and HSLs.

**Based on the proposed development, soil investigation results within the site were assessed against the 'Residential, parkland and public open space'.**

### 8.2.3 Health Screening Levels (HSLs)

The NEPM presents Tier 1 Health Screening Levels (HSLs) for the following petroleum compounds and fractions:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX);
- Naphthalene; and
- TPH C6-C10 and TPH >C10-C16 fractions

The HSLs are applicable to generic land uses such as residential, commercial/industrial or recreational/public open space and different soil types between the ground surface and soils >4 metres below ground level. The HILs have been applied to assess human health risks via the inhalation and direct contact pathways of exposure.

**Based on the proposed development, soil investigation results within the site will be assessed against the HSL "A&B".**

### 8.2.4 Ecological Investigation Levels (EILs)

The NEPM presents Ecological Investigation Levels (Interim EILs) for As, Cu, CrIII, Ni, Pb, Zn, DDT and naphthalene.

The EILs are applicable to generic land uses such as areas of ecological significance, urban residential areas and public open space, and commercial/industrial land uses. The EILs have been applied to assess risks to terrestrial ecosystems, generally, within the top 2 metres of soil at the final surface/ground level.

Site specific EILs for Copper, Zinc, Nickel and Chromium III can be derived by adding the Ambient Background Concentration (ABC) to the Added Contaminant Limits (ACL), as per the following formula $EIL = ABC + ACL$.

The ABC of a contaminant is the soil concentration in a specified locality that is the sum of the naturally occurring background level and the contaminant levels that have been introduced from diffuse or non-point sources by generating anthropogenic activity not attributed to industrial, commercial, or agricultural activities.

The ACL is the added concentration (above the ABC) of a contaminant above which further appropriate investigation and evaluation of the impact on ecological values is required. ACLs are based on the soil characteristics of pH, CEC and clay content. Different soils types / profiles will have different contaminant EILs rather than a single generic EIL for each contaminant. ACLs apply chromium III (CrIII), copper (Cu), nickel (Ni) and zinc (Zn) for site-specific EIL determination.

The soil properties to be measured for site-specific derivation of ACLs for CrIII, Cu, Ni and Zn are pH (Cu), CEC (Cu, Ni, Zn) and % clay (CrIII).

*Note – the lowest concentration of copper that is derived from the pH or the CEC calculation is to be used for the ACL.*

Insufficient data was available to derive ACLs for As, Pb, DDT and naphthalene. As a result, the derived EILs are generic to all soils and are presented as total soil contaminant concentrations in Tables 1(B)4 and 1(B)5.

### 8.2.5 Ecological Screening Levels (ESLs)

Table 1B (6) of the NEPM presents Ecological Screening Levels (ESLs) for TPH C6-C40 fractions, BTEX and benzo(a)pyrene.

The ESLs are applicable to generic land uses such as areas of ecological significance, urban residential areas and public open space, and commercial/industrial land uses. The ESLs have been applied to assess risks to terrestrial ecosystems, generally, within the top 2 metres of coarse or fine soil at the final surface/ground level.

### 8.2.6 Asbestos

Health screening for asbestos in soil, which are based on scenario-specific likely exposure levels, are adopted from the WA DoH guidelines and are referred in Table 7 in Schedule B1.

**Table 16 Health screening levels for asbestos contamination in soil**

| | Health Screening Level (w/w) | | | |
|---|---|---|---|---|
| **Form of asbestos** | **Residential A[1]** | **Residential B[2]** | **Recreational C[3]** | **Commercial/ Industrial D[4]** |
| Bonded ACM | 0.01% | 0.04% | 0.02% | 0.05% |
| FA and AF[5] (friable asbestos) | 0.001% | | | |
| All forms of asbestos | No visible asbestos for surface soil | | | |

1. Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
2. Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
3. Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
4. Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.
5. The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10). This screening level is not applicable to free fibres.

### 8.2.7 PFAS

The National Chemical Working Group of the Heads of EPAs Australia and New Zealand published "PFAS National Environmental Management Plan" Version 2.0 – January 2020 which provide a set the guidelines values for different land use to investigate and assess human health risks.

As no anthropogenic activity related to PFAS as described in Appendix B "PFAS National Environmental Management Plan Version 2.0 - January 2020" was identified during the site history research and desktop study, PFAS were not considered a Contaminants.

## 8.3 Export of Waste

To assess the waste classification of materials to be disposed of off-site, the NSW EPA refers to the NSW EPA (2014) "*Waste Classification Guidelines, Part 1: Classifying Waste"*.

# 9 SOIL INVESTIGATION

## 9.1 General Methodology

The soil investigation was carried out on the 9th & 10th October 2024 and was designed to meet the Data Quality Objectives (or SAQP). The fieldwork procedures adopted were carried out in general accordance with the Aargus fieldwork protocols, which are based on industry standard practice as prescribed in the NEPM.

Each borehole was drilled using a stainless-steel hand auger.

The boreholes were backfilled with spoil generated from the borehole.

A description of sub-surface conditions observed during drilling are presented in borehole logs included in Appendix K.

## 9.2 Sampling Design Rationale

Thirty-two boreholes (BH1 to BH32) were drilled by adopting a systematic grid sampling pattern across the site to provide general site coverage with consideration given to accessibility, site features and the proposed development zones.

A further discussion of the sampling rationale is provided below:

- BH1 to BH7 & BH9 – general site coverage in the western portion.
- BH8 – in the vicinity of the driveway / garage.
- BH10 to BH17 – in the vicinity of the former boat storage areas and/or driveway areas.
- BH18 – at the potential fill area.
- BH19 to BH32– general site coverage in the eastern portion.

Reference should be made to Figure 5 in Appendix A for the borehole locations.

It is considered that the number of sampling points adopted meets the minimum requirements of the NSW EPA "*Sampling Design Guidelines*" (2022) for a site area of 2.141 hectares and to detect a hotspot diameter of 30.5m.

## 9.3 Sampling Density and Sampling Depth

Boreholes were advanced through the topsoil / fill material and terminated at least 0.5m into natural soils to allow for the collection of at least one soil sample from the topsoil / fill material and one from natural soils.

## 9.4 Sampling Methodology

Soil sampling was carried out in general accordance with Aargus Fieldwork Protocols. In summary:

- Soil samples were collected using a stainless-steel hand auger from each soil type or change in lithology and approximately every 1 metre depth where no change in material was apparent.
- Samples were transferred into clean laboratory supplied containers using a hand trowel.
- In general, each soil sample was divided into two sub-samples. One of the sub-samples was placed into a laboratory-supplied container and a second sub-sample was placed in a separate zip-lock bag for field headspace screening using a PID.

Sampling of asbestos was undertaken as follows:

- One wetted 500ml sample.

## 9.5 Field Tests

A calibrated Photo-ionisation Detector (PID) meter was used to obtain the following field measurements:

- Background concentrations of ionisable volatile organic compounds (VOCs) in the ambient air taken approximately 5 to 10 metres upwind of the general work area; and
- Headspace analysis of bagged soil samples collected to detect the presence of ionisable VOCs.

The PID readings were observed before and after each measurement of a sample to ensure that the PID was operating correctly. The procedures followed in performing field headspace on soil samples can be found in the Aargus Field Protocols.

Readings of PID maximums, fluctuations and general comments of observation were recorded in Aargus field record forms included in Appendix L. The PID calibration certificate can be found in Appendix L.

## 9.6 Soil Laboratory Analysis

Soil samples were submitted to their respective laboratories as specified in Section 10.2. The schedules of analysis for each sampling batch are presented in Appendix O.

# 10 QUALITY ASSURANCE / QUALITY CONTROL

## 10.1 Field QA/QC

### 10.1.1 General

The frequency required for each field quality assurance / quality control (QA/QC) sample is presented in the table below.

**Table 17: QA/QC Sampling Frequency**

| | Intra-Lab Duplicates | Inter-Lab Duplicates | Rinsates | Trip Blanks | Trip Spikes |
|---|---|---|---|---|---|
| **Sampling Frequency** | 1 in 20 primary samples | 1 in 20 primary samples | 1 / Day | 1 / Day | 1 / Day |

### 10.1.2 Field Duplicates

Duplicates of primary samples were collected to enable the assessment of variability in analyte concentrations between samples collected from the same sampling point. The table below list the duplicate soil samples collected with their corresponding primary samples.

**Table 18: Soil Field Duplicate Samples**

| Primary Sample ID | Sample Depth (m bgl) | Blind Duplicate ID | Split Duplicate ID | Date Sampled |
|---|---|---|---|---|
| BH8 | 0 – 0.1 | D1 | SS1 | 09.10.2024 |
| BH18 | 0 – 0.1 | D2 | SS2 | 09.10.2024 |

### 10.1.3 Rinsates

Rinsate samples recovered for each day in which sampling took place to identify possible cross contamination between the sampling locations are listed in the table below.

**Table 19: Rinsate Samples**

| Sample ID | Equipment Type | Sample Media | Date Collected |
|---|---|---|---|
| R1 | Hand Trowel | Soil | 09.10.2024 |
| R1 | Hand Trowel | Soil | 10.10.2024 |

### 10.1.4 Trip Blanks / Spikes

Trip spike and trip blank samples were collected to assess the effect of sample handling on volatile concentrations in the samples collected and are listed in the table below.

**Table 20: Trip Blank/Trip Spikes**

| Sample ID | QC Sample Type | Media | Date Collected |
|---|---|---|---|
| TB1 | Trip Blank | Soil | 09.10.2024 |
| TS1 | Trip Spike | Soil | 09.10.2024 |
| TB2 | Trip Blank | Soil | 10.10.2024 |
| TB2 | Trip Spike | Soil | 10.10.2024 |

### 10.1.5 Sample Handling, Storage and Transport

The following sampling handling, storage and transport procedures were adopted to ensure sample integrity:

- Samples were collected in laboratory supplied containers. A list of sample preservation methods and the types of sample containers used are attached in Appendix M.
- Soil sample containers were placed immediately into a chilled cooler box and dispatched to their respective analytical laboratories on the same day. If this was not possible, samples were temporarily held overnight in the Aargus office refrigerator at a temperature of no greater than 4 ºC and dispatched the following day.
- A Chain of Custody form (COC) was completed for all samples collected and included with the samples for transport to their respective laboratories for chemical analysis. Copies of COCs are included in Appendix N.
- All glass bottles were individually bubble wrapped for protection and insulated containers/coolers were used for sample shipment.
- Disposable nitrile gloves were used for OH&S purposes and were changed between every sample location.

### 10.1.6 Decontamination Procedures

The decontamination of non-dedicated sampling equipment was achieved by washing with phosphate-free detergent and tap water, followed by a final rinse with distilled water. Decontamination was conducted after the collection of samples at each sample location. A clean pair of disposable gloves was used when handling each sample.

The augers were decontaminated between sampling locations by physically removing soil material between boreholes, washing the augers with Decon 90 and rinsing them with water.

### 10.1.7 Calibration of Equipment

The 10.6eV lamp of the PID was calibrated with isobutylene gas at 100ppm prior to commencement of fieldwork and prior to commencement of each day's fieldwork. The battery in the PID unit was recharged after every day's use in the field.

Copies of calibration records for each relevant item of equipment used can be found in Appendix L.

## 10.2 Laboratory QA/QC

### 10.2.1 Laboratories Used

The following NATA-accredited laboratories were commissioned to carry out laboratory analysis of soil samples collected:

- Primary Laboratory – SGS Environmental (Sydney)
- Secondary Laboratory – ALS Environmental
- ASET Environmental - conducted asbestos analysis on selected primary soil samples

These laboratories also operate Quality Systems that are designed to comply with ISO/IEC 17025. All primary samples, blind duplicates, rinsate samples, trip blank/spikes were dispatched to the primary laboratory. All split samples were dispatched to the secondary laboratory. Laboratory Certificates of Analysis are included in Appendix N.

### 10.2.2 Holding Times

The holding times for chemicals analysed are presented in Appendix M and were based on USEPA methods, Standard Methods for the Examination of Water and Wastewater (APHA).

### 10.2.3 Test Methods and Practical Quantitation Limits

The test methods adopted by the laboratories are listed in Appendix M and Practical Quantitation Limits (PQLs) adopted are specified within the Laboratory Certificates of Analysis included in Appendix N.

The methods used by the laboratories generally comply with those listed in the NEPM such as Standards Australia and International standards (US EPA SW-846, APHA 2005, ASTM 2008). Alternate methods may be used by the laboratories however the alternative method must be at least rigorous and reliable as the reference method, and either that:

- it has been validated against an appropriate certified reference material (CRM) on the range of soil types and concentrations most likely to be analysed. This requires adequate recovery of analytes using CRMs during method validation, as well as regular participation in national proficiency trials by bodies such as the National Measurement Institute (NMI) or Proficiency Testing Australia (PTA) or other accredited provider; and / or
- it has been verified against quantitative data generated by a laboratory that is accredited for the reference method to ISO 17025 by NATA or one of its mutual recognition agreement partners.

The laboratory should document the method performance verification and make the data available for independent audit.

## 10.3 QA/QC Data Evaluation

A full evaluation of the Data Quality Indicators (DQIs) for both fieldwork and laboratory procedures is presented in Appendix P. These were assessed with reference to Appendix V of the NEPM and Guidelines for the NSW Site Auditor Scheme (3rd ed.), 2017. In summary, the findings of the QA/QC evaluation indicated the following:

- Data Completeness – The data set is considered to be adequately complete.
- Data Comparability – The data set is considered to be adequately comparable. However, the following minor non-conformances were identified:
  - The analytical methods used for each analyte within each laboratory were the same but differed between the primary and the secondary laboratories. However, all analytical methods used were endorsed by NATA and were unlikely to affect the outcome of the results;
- Data Representativeness – The data set is considered to be adequately representative.
- Data Precision – The data set is considered to be adequately precise.
  However, the following non-conformances were identified:
  - All field duplicate results were within control limit, with the exception of:
    - Chromium, Copper & Nickel in BH8/D1
    - Arsenic, Copper, Lead, Nickel & Zinc in BH18/D2
    - Chromium & Copper in BH8/SS1
    - Nickel in BH18/SS2

    Due to sample heterogeneity and/or low concentrations detected. The exceedances were considered not to affect the adequacy of the sample results since the collected data is above 95% accuracy.
  - RPDs of the laboratory duplicates were within control limits, with the exception of Fluoranthene, Pyrene & Total PAH (18) in SE272613.042 / LB327025.025. Due to sample heterogeneity and/or low concentrations detected. The exceedances were considered not to affect the adequacy of the sample results since the collected data is above 95% accuracy.
- Data Accuracy – The data set is considered to be adequately accurate.
  However, the following non-conformances were identified:

- Used surrogate spikes were within control limits, with the exception of BH14 0.0-0.1 / SE272613.018. At least 2 of 3 surrogates are within acceptance criteria.
- The matrix spike recoveries were within control limits, with the exception of:
  - Zinc in SE272613.001 / LB327032.004.
  - TRH C29-C36 & TRH >C16-C34 (F3) in SE272613.009 / LB327025.027.

  Recovery failed acceptance criteria due to sample heterogeneity.

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation works were consistent with Aargus protocols and were found to meet the DQOs for this project.

It is therefore considered that the data is sufficiently reliable and that the results can be used for the purpose of this project.

# 11 FIELD OBSERVATIONS

## 11.1 Geology

Based on surface and sub-surface conditions observed during the intrusive investigation, the surface and sub-surface profile across the site is summarised in the table below.

**Table 21: Summary of Geological Observations**

| Geological Unit | Lithological Description | Depth Ranges: Top to Base (m bgl) |
|---|---|---|
| Topsoil | Sandy Clay, low plasticity, fine to medium grained. brown | 0.0m to 0.4m |
| Fill | Sandy Clay, low plasticity, fine to medium grained, white, brown | 0.0m to 0.4m (BH18) |
| Natural Soils (Residual) | Sandy CLAY, medium plasticity, fine grained, yellow, brown, white, red | 0.3m to 1.0m |

The following additional observations were made:

- No hydrocarbon staining was observed within any of the borehole locations.
- No hydrocarbon odours were encountered within any of the borehole locations.
- No fibre-containing fragments were observed in any of the borehole samples.

We recommend that this section be read in conjunction with Figure 5 (Borehole Location Plan) in Appendix A, the Daily Work Sheets in Appendix L and the borehole logs in Appendix K.

## 11.2 Field Headspace Results

Ionisable VOC detections in PID readings taken from soil samples subjected to field headspace analysis were all less than 1ppm. The PID field record forms can be found in Appendix L.

# 12 LABORATORY RESULTS

## 12.1 General

A comparison of soil laboratory results against their respective assessment criteria (as specified in Section 8) are presented in the summary tables in Appendix O. Certificates of laboratory analysis are attached in Appendix N. A discussion of the results is presented in the following sub-sections.

## 12.2 Soil Results

### 12.2.1 Heavy Metals

#### 12.2.1.1 Health Investigation Levels (HILs)

As indicated in Tables A1-1 & A1-2, the concentrations of the heavy metals were below the HIL 'A', with the exception of:

- The lead concentration of 880mg/kg in the sample BH10 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.
- The lead concentration of 1,300mg/kg in the sample BH11 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.
- The lead concentration of 800mg/kg in the sample BH12 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.

#### 12.2.1.2 Ecological Investigation Levels (EILs)

As indicated in Tables A1-1 & A1-2, the arsenic concentrations were below the Ecological Investigation Level (EIL) for urban residential and public open space.

The EILs for Copper, Zinc and Nickel were derived by adding the Ambient Background Concentration (ABC) to the Added Contaminant Limits (ACL), as per the following formula $EIL = ABC + ACL$.

The ABC for the site has been determined by recovering a sample from an appropriate reference point, that being:

- BH4 (0.3-0.4m) – a sample of uncontaminated (NATURAL) strata from within the western portion of the site.
- BH30 (0.5-0.6m) – a sample of uncontaminated (NATURAL) strata from within the eastern portion of the site.

The ABC concentrations are summarised in Table A3.

The results of pH and CEC for the natural soil samples are summarised in Table A2. Based on the results in Table A2, the site ACLs for Cu, Ni and Zn have been derived and are provided in Table A3.

The calculated EIL for Cu, Pb, Ni and Zn, after appropriate rounding, have been summarised in Table A3.

Therefore, as shown in Table A4-1, the Cu, Pb, Ni and Zn concentrations from boreholes BH1 to BH18 located in the western portion of the site were below the site derived EILs, with the exception of:

- The copper concentration of 230mg/kg in the sample BH10 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.
- The copper concentration of 330mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.
- The copper concentration of 240mg/kg in the sample BH12 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.

- The lead concentration of 1,300mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 1,100mg/kg.
- The zinc concentration of 3,400mg/kg in the sample BH10 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.
- The zinc concentration of 5,400mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.
- The zinc concentration of 3,400mg/kg in the sample BH12 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.

Therefore, as shown in Table A4-2, the Cu, Pb, Ni and Zn concentrations from boreholes BH19 to BH32 located in the eastern portion of the site were below the site derived EILs.

### 12.2.2 TRH, BTEX, NAPHTHALENE &/OR BENZO(a)PYRENE

#### 12.2.2.1 Health Screening Levels (HSLs)

As indicated in Table B1, the F1 ($C_6$-$C_{10}$), F2 (>$C_{10}$-$C_{16}$), benzene, toluene, ethyl benzene, xylenes and naphthalene concentrations were below the HSL 'A' & HSL 'B' for a clay soil profile with a source depth of "0m to <1m".

#### 12.2.2.2 Ecological Screening Levels (ESLs)

As indicated in Table B2, the F1 ($C_6$-$C_{10}$), F2 (>$C_{10}$-$C_{16}$), F3 ($C_{16}$-$C_{34}$), F4 ($C_{34}$-$C_{40}$), benzene, toluene, ethyl benzene, xylenes and benzo(a)pyrene concentrations were below the ESL for a fine grained soil texture in an "urban residential and public open space" environment, with the exception of:

- The benzo(a)pyrene concentration of 2.0mg/kg in the sample BH12 (0.0-0.1m) which exceeded the ESLs of 0.7mg/kg.

#### 12.2.2.3 Management Limits

As indicated in Table B3, the F1 ($C_6$-$C_{10}$), F2 (>$C_{10}$-$C_{16}$), F3 ($C_{16}$-$C_{34}$) and F4 ($C_{34}$-$C_{40}$) concentrations were below the Management Limits for a coarse / fine grained soil texture in an "residential parkland and public open space" environment.

### 12.2.3 PAH, OCP & PCB

#### 12.2.3.1 Health Investigation Levels (HILs)

As indicated in Table C, the concentrations of the benzo(a)pyrene (as TEQ), Total PAH, OCP and/or PCB were below the HIL 'A'.

#### 12.2.3.2 Ecological Investigation Levels (EILs)

As indicated in Table C, the concentrations of naphthalene and DDT/DDE/DDD were below the Ecological Investigation Level (EIL) for urban residential and public open space.

#### 12.2.3.3 Ecological Screening Levels (ESLs)

As indicated in Table C, the benzo(a)pyrene concentrations were below the ESL for a fine grained soil texture in an "urban residential and public open space" environment, with the exception of:

- The benzo(a)pyrene concentration of 2.0mg/kg in the sample BH12 (0.0-0.1m) which exceeded the ESLs of 0.7mg/kg.

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### 12.2.4 Asbestos

As indicated in Table D, asbestos was not detected in any of the samples analysed, with the exception of:

- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.02%w/w in the sample BH10 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.01%w/w in the sample BH11 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.01%w/w in the sample BH12 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as ACM at a concentration of 0.01%w/w in the sample BH12 (0.0-0.1m) which was equal to the %w/w asbestos for ACM - Residential use, childcare centres, preschools etc of 0.01%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.005%w/w in the sample BH15 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile, Amosite & Crocidolite Asbestos detected as AF at a concentration of 0.001%w/w in the sample BH17 (0.0-0.1m) which was equal to the %w/w asbestos for FA and AF of 0.001%w/w.

# 13 DISCUSSION OF RESULTS

## 13.1 Soil Quality

The soil assessment revealed the following:

- Heavy metals concentrations were below the HIL 'A' with the exception of:
  - The lead concentration of 880mg/kg in the sample BH10 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.
  - The lead concentration of 1,300mg/kg in the sample BH11 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.
  - The lead concentration of 800mg/kg in the sample BH12 (0.0-0.1m) which exceeded the HIL 'A' of 300mg/kg.
- Heavy metals concentrations were below the site derived EILs with the exception of:
  - The copper concentration of 230mg/kg in the sample BH10 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.
  - The copper concentration of 330mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.
  - The copper concentration of 240mg/kg in the sample BH12 (0.0-0.1m) which exceeded the site derived EILs of 95mg/kg.
  - The lead concentration of 1,300mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 1,100mg/kg.
  - The zinc concentration of 3,400mg/kg in the sample BH10 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.
  - The zinc concentration of 5,400mg/kg in the sample BH11 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.
  - The zinc concentration of 3,400mg/kg in the sample BH12 (0.0-0.1m) which exceeded the site derived EILs of 230mg/kg.
- TRH and BTEXN concentrations were below the HSL 'A&B', ESLs and/or Management Limits, with the exception of:
  - The benzo(a)pyrene concentration of 2.0mg/kg in the sample BH12 (0.0-0.1m) which exceeded the ESLs of 0.7mg/kg.

- PAH, OC & PCB concentrations were below the HIL 'A', EILs and/or ESLs with the exception of:
    - The benzo(a)pyrene concentration of 2.0mg/kg in the sample BH12 (0.0-0.1m) which exceeded the ESLs of 0.7mg/kg.

Asbestos was not detected in any of the samples analysed, with the exception of:

- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.02%w/w in the sample BH10 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.01%w/w in the sample BH11 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.01%w/w in the sample BH12 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile & Amosite Asbestos detected as ACM at a concentration of 0.01%w/w in the sample BH12 (0.0-0.1m) which was equal to the %w/w asbestos for ACM - Residential use, childcare centres, preschools etc of 0.01%w/w.
- Chrysotile & Amosite Asbestos detected as AF at a concentration of 0.005%w/w in the sample BH15 (0.0-0.1m) which exceeded the %w/w asbestos for FA and AF of 0.001%w/w.
- Chrysotile, Amosite & Crocidolite Asbestos detected as AF at a concentration of 0.001%w/w in the sample BH17 (0.0-0.1m) which was equal to the %w/w asbestos for FA and AF of 0.001%w/w.

Reference should be made to Figure 7 in Appendix A for a copy of the hotspot location plan.

The hotspots are located in the area of the site where numerous boats were previously stored, therefore, this area is required to be investigated further to determine the extent of potential contamination associated with this activity.

Reference should be made to Figure 9 in Appendix A for the area of concern.

# 14 CONCEPTUAL SITE MODEL

## 14.1 Conceptual Site Model

The refined Conceptual Site Model (CSM) presented in the table below provides a representation of the potential risks associated with the linkages between the following elements:

- Potential contamination sources and their associated contaminants of concern identified in Section 5. Only potential areas of concern with a significance rating of low to high were included;
- Potential human receptors that may be impacted by site contamination are current and future end-users, construction workers and the general public within the immediate vicinity;
- Potential environmental receptors identified in Section 4;
- Potential exposure pathways; and
- Whether each source-pathway-receptor pollution linkage are complete, limited or not present, based on current and future site conditions.

**Table 22: Conceptual Site Model**

| Potential Sources | Potential Receptor | Potential Exposure Pathways | Complete Linkages | Risk | Justification |
|---|---|---|---|---|---|
| Copper, Lead, Zinc & Asbestos in BH10<br><br>Copper, Lead, Zinc & Asbestos in BH11<br><br>Copper, Lead, Zinc, BaP & Asbestos in BH12<br><br>Asbestos in BH15<br><br>Asbestos in BH17 | Site users or the general public | Dermal contact, inhalation or ingestion of exposed impacted soils | Limited (Current) | Low | Direct contact with impacted soils is limited to the grassed areas. |
| | | | No (Future) | Negligible | If present, contaminated soils are likely to be remediated and removed for off-site disposal. |
| Asbestos in buildings | Site user or visitors | Inhalation of airborne fibres | Limited (Current) | Low | If present, asbestos material is likely to be limited to the building fabric and would be in bonded form. |
| | | | No (Future) | Negligible | A hazardous materials survey is likely to be required prior to the demolition of the existing buildings for the proposed development and licensed contractors would have to remove any asbestos likely to be present. |

# 15 CONCLUSION AND RECOMMENDATIONS

The desktop study identified some areas of potential environmental concern, in relation to imported fill of unknown origin, previous site uses, leaks of motor vehicles, past use of adjoining properties and potential presence of hazardous materials in current or past building structures, which may pose risks to human and environmental receptors.

Upon completion of the site investigation and laboratory analysis, the soil assessment revealed the following analytes and respective locations which exceeded the SAC:

- Copper, Lead, Zinc & Asbestos in BH10
- Copper, Lead, Zinc & Asbestos in BH11
- Copper, Lead, Zinc, BaP & Asbestos in BH12
- Asbestos in BH15
- Asbestos in BH17

Based on the results of this investigation, it is considered that the risks to human health and the environment associated with soil contamination at the site are low within the context of the proposed use of the site for construction into Sport and Recreational Facilities and educational establishment including a two-court indoor multipurpose hall with underground parking area, an external multipurpose pitch, and associated amenities, car and bus parking and drop off areas.

With reference to Clause 4.6 of the State Environmental Planning Policy (Resilience and Hazards) 2021, the site will be considered to be rendered suitable subject to the completion of a Remedial Action Plan (and after remediation and validation) for the proposed development for the purposes of an education establishment and sport and recreation use.

It is recommended that further investigations are undertaken in the former boat storage area to determine the extent of potential contamination associated with this activity.

Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014).

*It should be noted that the area in the vicinity of the creek line, that being the creek and the embankments to the east and west, within the proposed Riparian Zone, could not be fully accessed, therefore there is a potential for buried fill and/or other potential environmental concerns in this area.*

If during the remaining site works, significant odours and / or evidence of gross contamination not previously detected are encountered, or any other significant unexpected occurrence, site works should cease in that area, at least temporarily, and the environmental consultant should be notified immediately to set up a response to this unexpected occurrence.

This Detailed Site Investigation was prepared to support the Planning Secretary's Environmental Assessment Requirements (SEARs), in particular *Section 16 - Contamination and Remediation* (Application number: SSD-73688210, dated 26th July 2024).

Thank you for the opportunity to undertake this work. We would be pleased to provide further information on any aspects of this report.

For and on behalf of
**Aargus Group**

**Written by:**



**Harsha Muthu**
Environmental Engineer

**Reviewed By:**



**Mark Kelly**
Principal Environmental Consultant

# LIMITATIONS

The Aargus assessment is based on the result of limited site investigations and sample testing. Neither Aargus, nor any other reputable consultant, can provide unqualified warranties nor does Aargus assume any liability for site conditions not observed or accessible during the time of the investigations.

Despite all reasonable care and diligence, the materials encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. There is always some disparity in subsurface conditions across a site that cannot be fully defined by investigation. Hence it is unlikely that measurements and values obtained from sampling and testing during environmental works carried out at a site will characterise the extremes of conditions that exist within the site. In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions, truck movement or contractor movement of soils and other events, e.g. groundwater movement and or spillages of contaminating substances. These changes may occur subsequent to Aargus investigations and assessment.

This report and associated documentation and the information herein have been prepared solely for the use of the client at the time or writing the report and is valid (for the purposes of management or transport of material) for a period of one month only from the date of issue. Any other reliance assumed by third parties on this report shall be at such parties' own risk. Any ensuing liability resulting from use of the report by third parties cannot be transferred to Aargus.

Whilst this report provides a review of site conditions encountered at sampling locations within the investigation, it should be noted that if materials are proposed to moved from site - Part 5.6, Section 143 of the Protection of the Environment Operations (POEO) Act 1997 states that is an offence for waste to be transported to a place that cannot lawfully be used as a facility to accept that waste. It is the duty of the owner and transporter of the waste to ensure that all material removed from a site must be accompanied by an appropriate waste classification report and materials are disposed of appropriately. An environmental or validation report does not constitute a waste classification report and results are treated

differently. Aargus accepts no liability for the unlawful disposal of waste materials from any site. Aargus does not accept any responsibility for the material tracking, loading, management, transport or disposal of waste from the site. If material is to be removed from a site, before disposal of any material to a licensed landfill is undertaken, the site owner must ensure an appropriate waste classification exists for all materials on the site planning to be removed, the waste producer will need to obtain prior consent from the licensed landfill/recycler. The receiving site should check to ensure that the material received matches the description provided in the report.

Opinions are judgements, which are based on our understanding and interpretation of current regulatory standards, and should not be construed as legal opinions.

Appendix Q – Important information about your environmental site report should also be read in conjunction with this report.

# REFERENCES

This report was prepared with reference to the following guiding documents:

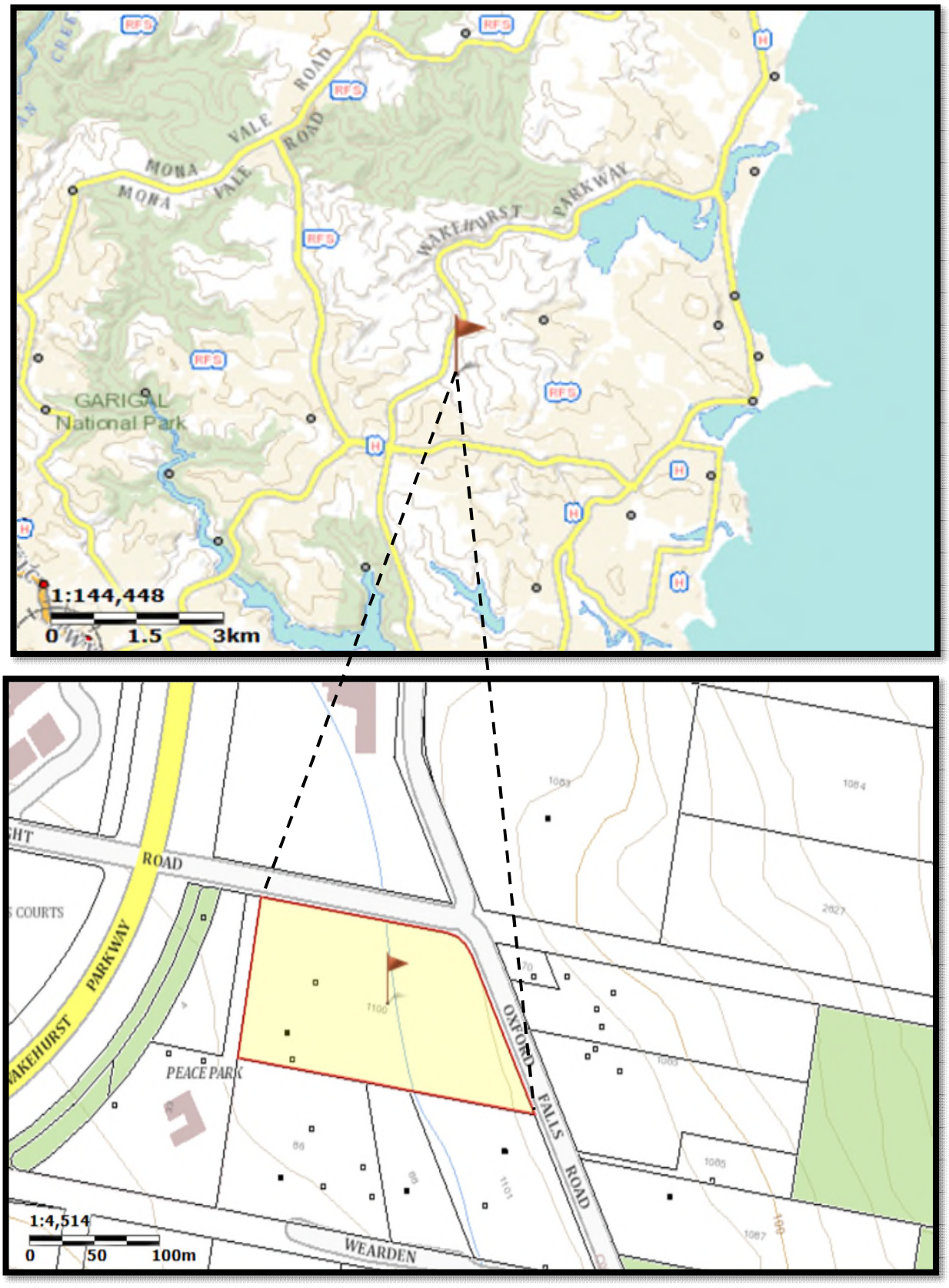

- "*National Environmental Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)*", NEPC (2013).
- NSW EPA (2014) – "*Waste Classification Guidelines, Part 1: Classifying Waste*".
- NSW EPA "*Guidelines for the NSW Site Auditor Scheme*" (2017, 3rd edition).
- NSW EPA "*Guidelines for Consultants Reporting on Contaminated Sites*" (2020).
- NSW EPA "*Sampling Design Guidelines*" (2022).
- NSW Department of Planning and Environment (2022) – The State Environmental Planning Policy (Resilience and Hazards) 2021: "*Chapter 4 – Remediation of Land*".

# APPENDIX A

## SITE PLANS

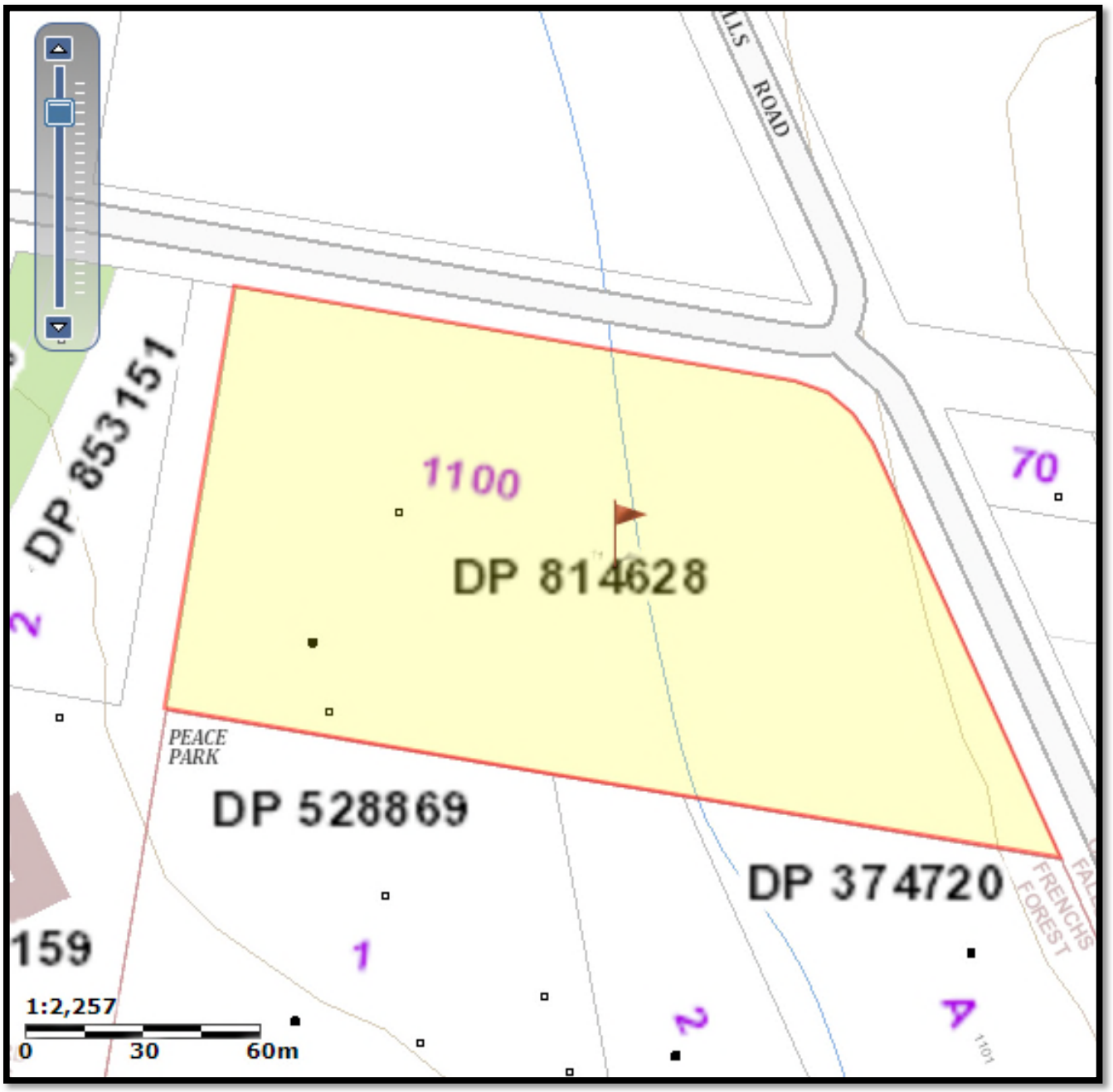
Aargus

# SITE LOCALITY MAP




| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 1 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | HM | **Date** | 18.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# SITE PLAN – LOT & DEPOSITED PLAN




| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 2 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# SITE FEATURES

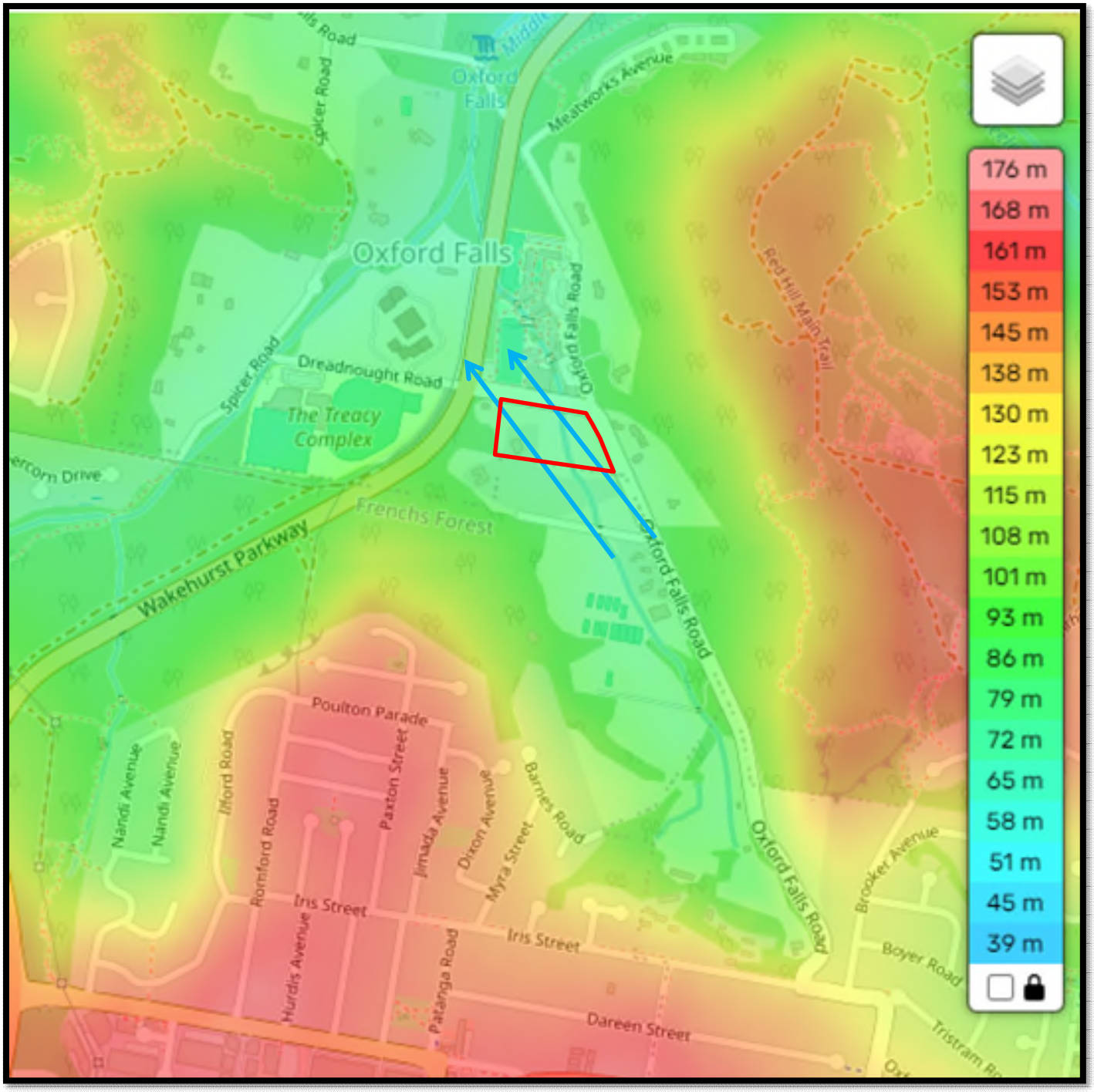



**SITE FEATURES - LEGEND**

1. Double-storey residential building with tile roof and brick walls
2. Concrete driveway
3. Carpark with brick walls and tile roof
4. Swimming pool
5. Single-storey residential building with wooden walls and metal roof
6. Cubby House
7. Tennis Court
8. Creek
9. Metal sheds
10. Horse Stables
11. Previously contained boats
12. Filled area
13. Disturbed area

| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 3 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# INFERRED GROUNDWATER FLOW DIRECTION




**SITE FEATURES - LEGEND**

→ Inferred Groundwater Flow Direction

| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 4 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | NTS | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.20204 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# BOREHOLE LOCATIONS ON AERIAL VIEW




**LEGEND**

Aargus borehole locations 2024

| ROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 5 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# BOREHOLE LOCATIONS ON PROPOSED DEVELOPMENT LAYOUT




**LEGEND**

Aargus borehole locations 2024

| ROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 6 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# HOTSPOT LOCATIONS ON AERIAL VIEW




**LEGEND**

Aargus Hotspot Locations 2024

| ROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 7 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# HOTSPOT LOCATIONS ON PROPOSED DEVELOPMENT LAYOUT




**LEGEND**

Aargus Hotspot Locations 2024

| ROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 8 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# AREA OF CONCERN




**LEGEND**

Area of Concern

| ROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Inspection | **Figure No.** | 9 | **Rev No.** | 1 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A4 |
| **Client** | Queenwood School for Girls Ltd | **Drawn by** | SK | **Date** | 30.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# APPENDIX B

## PROPOSED DEVELOPMENT PLANS

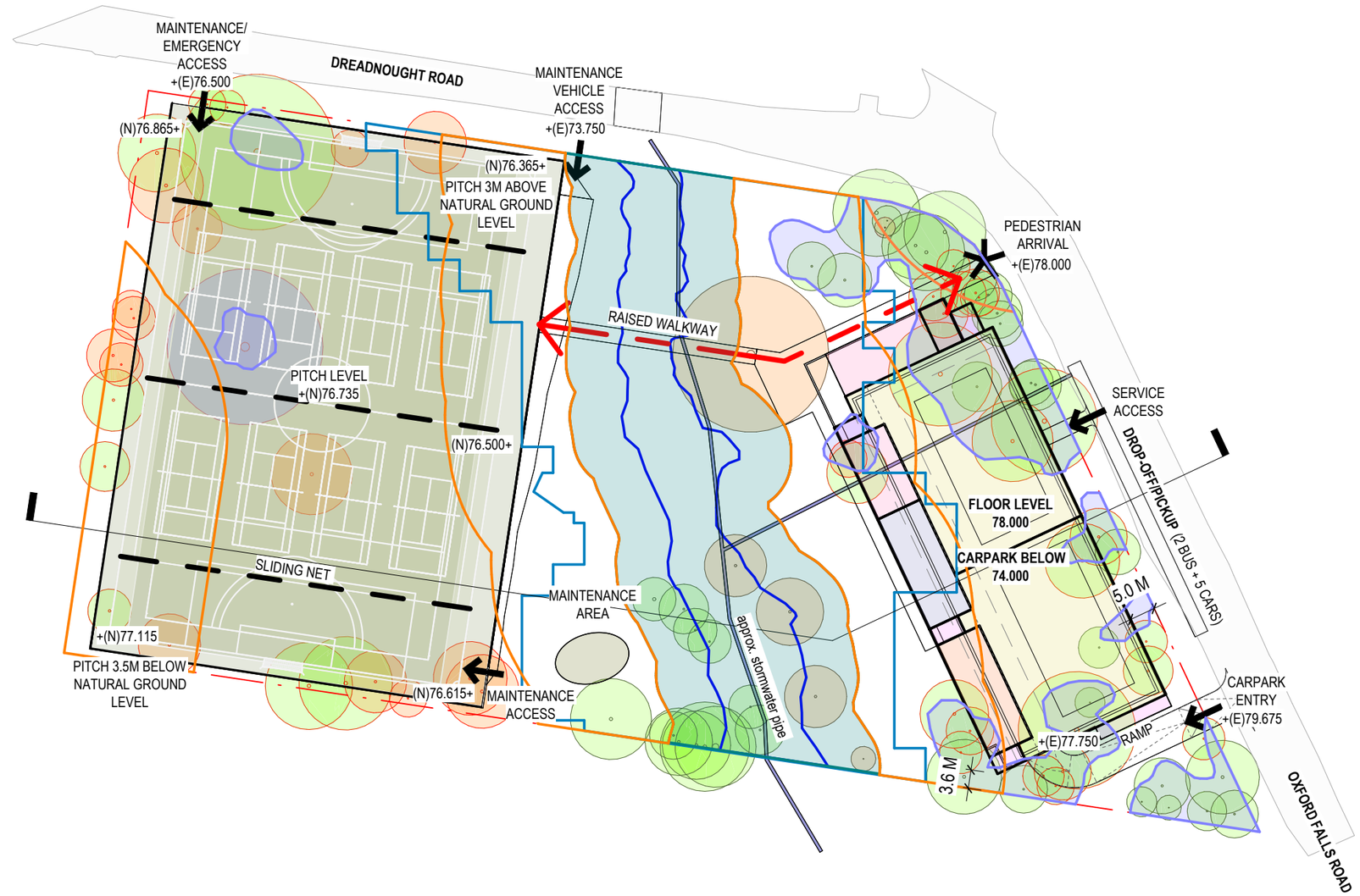
Aargus

# 03 Updated Design Option Drawings

## 3.2 OPTION 2

Key risks with the Design Option include setbacks and bushfire, however due to the narrower proportion of the building, overlap of the APZ is reduced compared to Option 1.

Due to the length of the building, the option impacts additional high retention trees in the north east of the site than Option 1




- High Bank Line
- Bushfire (APZ - 37m)
- Ecology (remnant native forest)
- Ecology (approximate habitat tree location)
- Ecology (Riparian Vegetative Zone (VRZ))
- Flooding (flood prone land (PMF))
- Stormwater (approximate stormwater conduit line)
- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)
- Significant Tree Retention Value
- High Tree Retention Value
- Moderate Tree Retention Value
- Trees demolished (indicative)

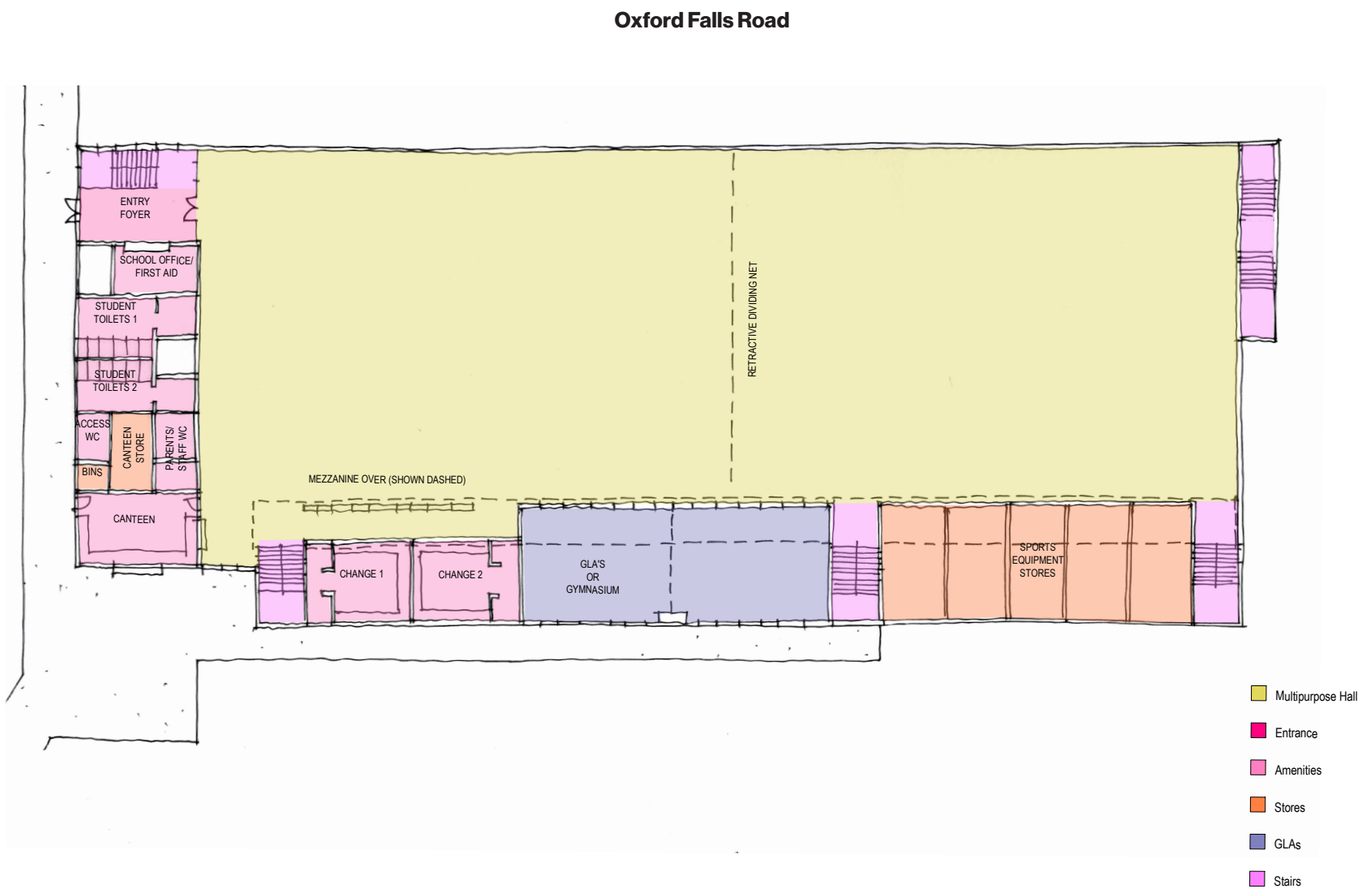
Note: Trees that have Low or Very Low Tree Retention Values have not been shown in alignment with the Arborist Assessment Report

| Tree Retention Value | No. Trees Retained |
|---|---|
| None | |
| High | 34 |
| Moderate | 6 |
| Grand total: 40 | |

| Tree Retention Value | No. Trees Removed |
|---|---|
| New Construction | |
| Significant | 1 |
| High | 34 |
| Moderate | 15 |
| Grand total: 50 | |

# 04 Indicative Plans

## 4.3 DESIGN OPTION 2




**Ground Level**

# APPENDIX C

## SITE PHOTOGRAPHS

Aargus

# SITE PHOTOGRAPHS

| | |
|---|---|
| **Client:** | Queenwood School for Girls Ltd |
| **Project:** | DSI |
| **Site Location:** | 1100 Oxford Falls Road, Oxford Falls NSW |
| **Job No.:** | ES9402/3 |
| **Photos Taken By:** | HM |

**Photograph Nº 1**



View of: The Concrete driveway.
Inspected on 09.10.2024

**Photograph Nº 2**



View of: The house from the front lawn.
Inspected on 09.10.2024

**Photograph Nº 3**



View of: The back yard of the property .
Inspected on 09.10.2024

**Photograph Nº 4**



View of: The cubby house at the front of the property.
Inspected on 09.10.2024

**Photograph Nº 5**



View of: The double story building and the garage.
Inspected on 09.10.2024

**Photograph Nº 6**



View of: The swimming pool and a residential at the back.
Inspected on 09.10.2024

## SITE PHOTOGRAPHS

| | |
|---|---|
| **Client:** | Queenwood School for Girls Ltd |
| **Project:** | DSI |
| **Site Location:** | 1100 Oxford Falls Road, Oxford Falls NSW |
| **Job No.:** | ES9402/3 |
| **Photos Taken By:** | HM |

**Photograph Nº 7**



View of: The wooden bridge which goes over the creek.
Inspected on 09.10.2024

**Photograph Nº 8**



View of: The Lawn at the front of the property.
Inspected on 09.10.2024

**Photograph Nº 9**



View of: The eastern portion of the site.
Inspected on 09.10.2024

**Photograph Nº 10**



View of: The few metal structures at the eastern portion of the property.
Inspected on 09.10.2024

**Photograph Nº 11**



View of: The tennis court at the property.
Inspected on 09.10.2024

**Photograph Nº 12**



View of: Creek observed .
Inspected on 09.10.2024

# APPENDIX D

## LAND TITLE INFORMATION

Aargus

# Title Search NSW

30/10/2024 11:26 AM

Client Reference: DI-ES9402/3

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

---

FOLIO: 1100/814628

---

| SEARCH DATE | TIME | EDITION NO | DATE |
|---|---|---|---|
| 30/10/2024 | 11:25 AM | 10 | 23/8/2024 |

LAND

---

LOT 1100 IN DEPOSITED PLAN 814628
AT OXFORD FALLS
LOCAL GOVERNMENT AREA NORTHERN BEACHES
PARISH OF MANLY COVE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP814628

FIRST SCHEDULE

---

QUEENWOOD SCHOOL FOR GIRLS LTD (T AU359152)

SECOND SCHEDULE (1 NOTIFICATION)

---

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

NOTATIONS

---

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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LAND REGISTRY SERVICES

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DI-ES9402/3 PRINTED ON 30/10/2024

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register.
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# Historical Title Search NSW

30/10/2024 11:27 AM

Client Reference: DI-ES9402/3

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

---

SEARCH DATE

---

30/10/2024 11:26AM

FOLIO: 1100/814628

---

First Title(s): VOL 6670 FOL 129
Prior Title(s): 1100/752038

| Recorded | Number | Type of Instrument | C.T. Issue |
|---|---|---|---|
| 15/1/1992 | DP814628 | DEPOSITED PLAN | FOLIO CREATED EDITION 1 |
| 8/12/1994 | U852897 | TRANSFER | EDITION 2 |
| 27/8/1997 | | AMENDMENT: LOCAL GOVT AREA | |
| 15/10/2002 | 9031660 | APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE | EDITION 3 |
| 9/12/2002 | 9199581 | MORTGAGE | EDITION 4 |
| 10/2/2003 | 9364573 | DISCHARGE OF MORTGAGE | EDITION 5 |
| 16/11/2004 | AB97053 | TRANSFER | |
| 16/11/2004 | AB97054 | MORTGAGE | EDITION 6 |
| 21/9/2011 | AG512337 | DISCHARGE OF MORTGAGE | |
| 21/9/2011 | AG512338 | MORTGAGE | EDITION 7 |
| 20/7/2018 | AN519871 | DEPARTMENTAL DEALING | |
| 8/9/2018 | AN695391 | DEPARTMENTAL DEALING CORD ISSUED | EDITION 8 |
| 12/9/2023 | AT427016 | CAVEAT | EDITION 9 |
| 23/8/2024 | AU359150 | WITHDRAWAL OF CAVEAT | |
| 23/8/2024 | AU359151 | DISCHARGE OF MORTGAGE | |
| 23/8/2024 | AU359152 | TRANSFER | EDITION 10 |

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*** END OF SEARCH ***

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# Historical Title Search NSW

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Client Reference: DI-ES9402/3

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

---

SEARCH DATE

---

30/10/2024 12:29PM

FOLIO: 1100/752038

---

First Title(s): VOL 6670 FOL 129
Prior Title(s): VOL 15310 FOL 11

| Recorded | Number | Type of Instrument | C.T. Issue |
|---|---|---|---|
| 4/8/1986 | DP752038 | DEPOSITED PLAN | FOLIO CREATED EDITION 1 |
| 13/11/1986 | W613219 | DISCHARGE OF MORTGAGE | |
| 13/11/1986 | W613220 | DISCHARGE OF MORTGAGE | |
| 13/11/1986 | W613221 | TRANSFER | EDITION 2 |
| 14/2/1991 | | AMENDMENT: VOL FOL INDEX | |
| 15/1/1992 | DP814628 | DEPOSITED PLAN | FOLIO CANCELLED RESIDUE REMAINS |
| 27/8/1997 | | AMENDMENT: LOCAL GOVT AREA | |
| 2/4/2007 | AD23587 | DEPARTMENTAL DEALING | |

*** END OF SEARCH ***

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Req:R318755 /Doc:DL AU359152 /Rev:23-Aug-2024 /NSW LRS /Prt:30-Oct-2024 11:58 /Seq:1 of 2
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**System Document Identification**

**Form Number:** 01T-e
**Template Number:** t_nsw18
**ELN Document ID:** 2725572141
**ELN NOS ID:** 2725572142

# TRANSFER

**New South Wales**
**Real Property Act 1900**

**Land Registry Document Identification**

AU359152

**Stamp Duty:** 10974165-001

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

**LODGED BY:**

| | |
|---|---|
| **Responsible Subscriber:** | SPARKE HELMORE LAWYERS ABN 78848387938 |
| **Address:** | L 29, 25 Martin PL<br>Sydney 2000 |
| **Email:** | property.registration@sparke.com.au |
| **ELNO Subscriber Number:** | 14960 |
| **Customer Account Number:** | 501746Y |
| **Document Collection Box:** | 42G |
| **Client Reference:** | LLWQUE922-00003 |

**LAND TITLE REFERENCE**

1100/814628

**TRANSFEROR**

ANTHONY NG

JOAN NG

NICHOLAS NG

KIMBERLEY NG

**TRANSFEREE**

QUEENWOOD SCHOOL FOR GIRLS LTD ACN 000532696
Registered company

**Tenancy:** Sole Proprietor

**CONSIDERATION**

The transferor acknowledges receipt of the consideration of $10,700,000.00

**ESTATE TRANSFERRED**

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

**SIGNING FOR TRANSFEROR**

I certify that:

1. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.
2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.

**Party Represented by Subscriber:**

ANTHONY NG
JOAN NG
NICHOLAS NG
KIMBERLEY NG

Req:R318755 /Doc:DL AU359152 /Rev:23-Aug-2024 /NSW LRS /Prt:30-Oct-2024 11:58 /Seq:2 of 2
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402/3

**Signed By:** Yao Cheng Liu
**Signer Capacity:** Practitioner Certifier
**ELNO Signer Number:** 59552
**Digital Signing Certificate Number:**

**Signed for Subscriber:** YCL PROPERTY CONVEYANCING SERVICES PTY LTD ABN 42623716101

LI & ASSOCIATES

**Subscriber Capacity:** Representative Subscriber
**ELNO Subscriber Number:** 23917
**Customer Account Number:** 503242
**Date:** 23/08/2024

**SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.
2. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
3. The Certifier has retained the evidence supporting this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.

**Party Represented by Subscriber:**

QUEENWOOD SCHOOL FOR GIRLS LTD

**Signed By:** Luke Woodward
**Signer Capacity:** Practitioner Certifier
**ELNO Signer Number:** 37131
**Digital Signing Certificate Number:**

**Signed for Subscriber:** PARTNERS OF SPARKE HELMORE ABN 78848387938

SPARKE HELMORE LAWYERS

**Subscriber Capacity:** Representative Subscriber
**ELNO Subscriber Number:** 14960
**Customer Account Number:** 501746
**Date:** 23/08/2024

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Req:R318773 /Doc:DL AB097053 /Rev:18-Nov-2004 /NSW LRS /Pgs:ALL /Prt:30-Oct-2024 11:59 /Seq:1 of 1
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Form: 01T
Licence: 01-09-023
Licensee: Aust. Forms P/L

# TRANSFER

New South Wales
Real Property Act 1900

AB97053E

162B
2168586 EX QI
VENDOR DUTY ENDORSED
Office of State Revenue NSW Treasury

NSW Treasury
Client No: 1405240 213
Duty: $720 Trans No: 2175296
Asst details:
10 SEP 2004

PRIVACY NOTE: This information is legally required and will become part of the public record

**STAMP DUTY** Office of State Revenue use only

(A) **TORRENS TITLE** If appreciate, specify the part transferred
FOLIO IDENTIFIER: **1100/814628**

(B) **LODGED BY**

| Delivery Box | Name, Address or DX and Telephone | CODE |
|---|---|---|
| LSA | **LLPN: 1230110** | T |
| | Reference (optional): SYCG2601 | TW (Sheriff) |
| | **National Australia Bank Limited**<br>**197 Prospect Highway**<br>**Seven Hills NSW 2147**<br>**Tel: (02) 8825 0898** | |

(C) **TRANSFEROR**
ROSS CHARLES PITTS

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of **$ 3,700,000.00** and as regards

(E) **ESTATE** The land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSRERRED** .....
.....

(G) Encumbrances (if applicable): 1. ..... 2. ..... 3. .....

(H) **TRANSFEREE**
in a one half share
ANTHONY NG, JOAN NG as joint tenant and NICHOLAS NG & KIMBERLEY NG as tenant in common as to ~~their shares~~ a one half share

(I) **TENANCY:**

**DATE** ____ / ____ / ____
Dd Mm Yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness: S. R Morris

Name of witness: SHIRLEY RAE MORRIS

Address of witness: 3A/72 PRINCE STREET
MOSMAN NSW 2088

Certified correct for the purpose of the Real Property Act 1900 by the transferor.

Signature of transferor:

I certify that the transferee, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Name of witness:
Address of witness:

Certified correct for the purpose of the Real Property Act 1900 by the transferor.

Signature of transferee:

If signed on the transferee's behalf by a solicitor or licensed conveyancer, insert the signatory's full name and capacity below:
**Siew Yin Woo Solicitor**



All handwriting must be in block capitals.

A set of notes on this form (01T-2) us available from Land and Property Information NSW.

LAND REGISTRY SERVICES

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Req:R318793 /Doc:DL U852897 /Rev:17-Mar-2010 /NSW LRS /Pgs:ALL /Prt:30-Oct-2024 12:00 /Seq:1 of 1
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402?3

97-017 (1)

# TRANSFER

Real Property Act, 1900

U 852897 Q

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1994/95 S8 NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

**(A) LAND TRANSFERRED**
Show no more than 20 References to Title. If appropriate, specify the share transferred.

VOLUME 15310 FOLIO 11
NOW 1100/814628

**(B) LODGED BY**

| L.T.O. Box | Name, Address or DX and Telephone |
|---|---|
| 574W | MARSHALL MARKS KENNEDY<br>SOLICITORS<br>179 ELIZABETH STREET<br>SYDNEY 2000<br>DX 231 SYDNEY PH: 950 2600<br>Reference (max. 15 characters): PWJ: PIT940241 |

**(C) TRANSFEROR** VERONICA MARGARET PITTS

(D) acknowledges receipt of the consideration of Pursuant to Order of the Family Court of Australia dated 25th November 1994 and as regards the land specified above transfers to the transferee an estate in fee simple as joint tenant

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

**(F) TRANSFEREE** T ROSS CHARLES PITTS

**(G)** TENANCY:

**(H)** We certify this dealing correct for the purposes of the Real Property Act, 1900 **DATE** 25th November, 1994.

Signed in my presence by the transferor who is personally known to me

Signature of Witness

NEIL ARTHUR WILKINSON - SOLICITOR
Name of Witness (BLOCK LETTERS)

Horton Roach, Moroney Dove
Address of Witness

Signature of Transferor

Signed in my presence by the transferee who is personally known to me

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferee

Solicitor Phillip Jones.

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

H. C. MARTYN & SONS (AUST.) PTY. LTD. PH: (02) 699 2499

OFF BA W337783

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Req:R319201 /Doc:DL W613221 /Rev:06-Oct-2010 /NSW LRS /Pgs:ALL /Prt:30-Oct-2024 12:31 /Seq:1 of 1
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402?3

W613221

RP 13

STAMP DUTY [redacted]

# TRANSFER

REAL PROPERTY ACT, 1900

T 3 3 of 3 4

$ 3[illegible]

R3/3

| Torrens Title Reference | If Part Only, Delete Whole and Give Details | Location |
|---|---|---|
| [redacted] 1100/752038 formerly being Volume 15310 Folio 11 | WHOLE | OXFORD FALLS |

**DESCRIPTION OF LAND** Note (a)

**TRANSFEROR** Note (b)

ANNE PATRICIA FULTON of Lot 1100, Dreadnought Road, Oxford Falls, Married Woman

**ESTATE** Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 600,000.00.
and transfers an estate in fee simple
in the land above described to the TRANSFEREE

**TRANSFEREE** Note (d)

ROSS CHARLES PITTS of 52 Rathowen Street, Killarney Heights, Company Director AND VERONICA MARGARET PITTS, his Wife

OFFICE USE ONLY

JT2

**TENANCY** Note (e)

as joint tenants/~~tenants in common~~

**PRIOR ENCUMBRANCES** Note (f)

subject to the following PRIOR ENCUMBRANCES 1. ..... 2. ..... 3. .....

DATE 11th November 1986

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

**EXECUTION** Note (g)

Signed in my presence by the transferor who is personally known to me

[signature]
Signature of Witness

ROBERT FULTON
Name of Witness (BLOCK LETTERS)

1100 DREADNOUGHT RD OXFORD FALLS
Address and occupation of Witness

CO DIRECTOR

Signature of Transferor

Signed in my presence by the transferee who is personally known to me

Note (g)

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

Solicitor for Signature of Transferee G.A. HILTON,

**TO BE COMPLETED BY LODGING PARTY** Notes (h) and (i)

LODGED BY

HENRY DAVIS, YORK & CO.
SOLICITORS
175 PITT STREET, SYDNEY. 2000
D.X. 173 SYDNEY
Tel: 232-3533
236S

Delivery Box Number

| LOCATION OF DOCUMENTS | CT | OTHER |
|---|---|---|
| Herewith. | 1 | |
| In L.T.O. with | | |
| Produced by | | |

**OFFICE USE ONLY**

| Checked | Passed | REGISTERED - -19 | Secondary Directions | | |
|---|---|---|---|---|---|
| EAS | | | | | |
| Signed | Extra Fee | 13 NOV 1986 | Delivery Directions | CT | LP |

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Req:R318901 /Doc:CT 15310-011 CT /Rev:22-Dec-2010 /NSW LRS /Pgs:ALL /Prt:30-Oct-2024 12:07 /Seq:1 of 2
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402?3

15310011

NEW SOUTH WALES

# [redacted]ICATE OF TITLE

[redacted] PROPERTY ACT, 1900

First Title Vol. 6670 Fol. 129

Prior Title Vol. 6670 Fol. 129

Vol 15310 Fol 11

EDITION ISSUED 22 2 1985

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

CANCELLED

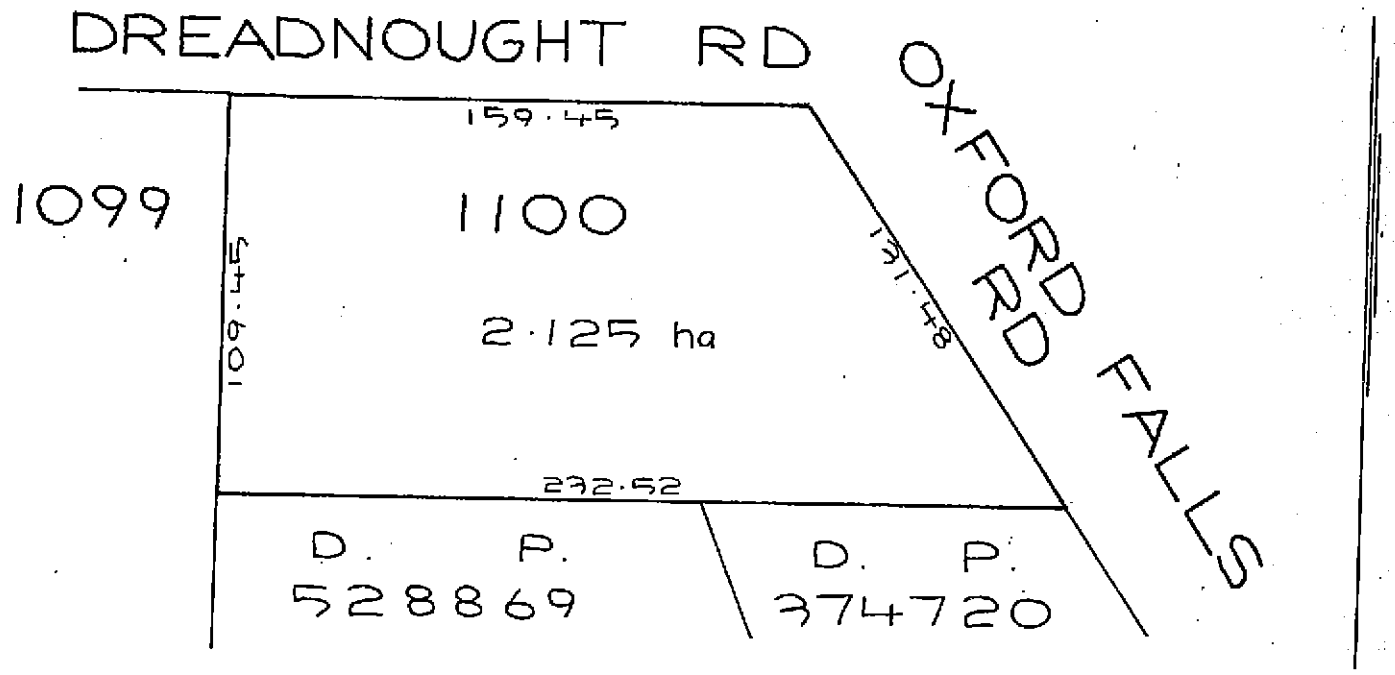
Registrar General.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON (Page 1) Vol 15310 Fol 11

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

## PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES




V460877

LAND REFERRED TO

Portion 1100 at Oxford Falls in the Shire of Warringah Parish of Manly Cove County of Cumberland.

FIRST SCHEDULE

ANNE PATRICIA FULTON.

SECOND SCHEDULE

1. Land excludes minerals and is subject to reservations and conditions in favour of the Crown - see Crown grant.
2. ~~Restrictions on dealings - see s.31 Closer Settlement Act, 1904 (Settlement Purchase 1920/4 Metropolitan).~~ W337783
3. V460877 Mortgage to Commonwealth Savings Bank of Australia.

RG 2/64

40828—4036

Vol 15310 Fol 11

## FIRST SCHEDULE (continued)

| REGISTERED PROPRIETOR | Registrar General |
|---|---|
| LIO CANCELLED - NEW FOLIO IS 1100/752038 | |

## SECOND SCHEDULE (continued)

| | PARTICULARS | Registrar General | CANCELLATION |
|---|---|---|---|
| W337783 | Request Attention is directed to Section 8 of the Land Aggregation Tax Management Act, 1971 Registered 27-5-1986 | | |
| W387399 | Mortgage to Commonwealth Bank of Australia. Registered 27-6-1986. | | |

## NOTATIONS AND UNREGISTERED DEALINGS

W 337783 Appl/E
W387399 M R

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

Req:R318901 /Doc:CT 15310-011 CT /Rev:22-Dec-2010 /NSW LRS /Pgs:ALL /Prt:30-Oct-2024 12:07 /Seq:2 of 2
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Req:R319213 /Doc:CT 06670-129 CT /Rev:09-Aug-2012 /NSW LRS /Prt:30-Oct-2024 12:32 /Seq:1 of 2
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402/3

No. 1952/1608

# State of New South Wales. [LAND GRANT]

Closer Settlement Promotion Act, 1910, or Closer Settlement (Amendment) Act, 1918.

NEW SOUTH WALES ONE POUND STAMP DUTY SYDNEY, N.S.W.

N.S.W. DEPARTMENT 12 6 1953 - N

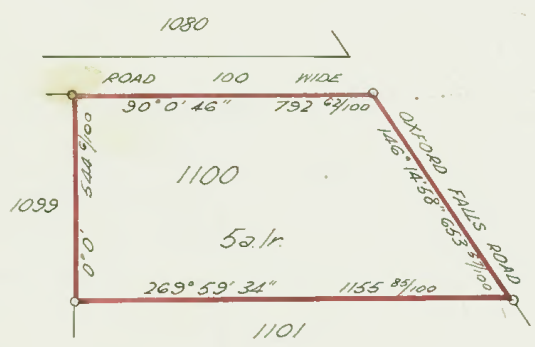
Register Book Vol. 6670 Fol. 129

CANCELLED W

## SETTLEMENT PURCHASE GRANT.

**ELIZABETH II, by the Grace of God, of Great Britain, Ireland, and the British Dominions beyond the Seas, Queen, Defender of the Faith:-**
**TO ALL to whom these Presents shall come, Greeting:-**

**Whereas** the RURAL RECONSTRUCTION BOARD hereinafter called the said BOARD ~~in Our State of New South Wales~~ is the holder of Settlement Purchase No. 1920/4 in the Metropolitan Land District ~~of~~ in Our said State comprisiug the parcel of land surrendered to the Crown on the twenty second day of June 1920 aud thereon duly acquired as a Settlement Purchase under the provisions of the Closer Settlement (Amendment) Act, 1918 being the land hereinafter described **And Whereas** the sum of three hundred and forty six pounds Sterling being the purchase money payable for the said Laud has been duly paid into the Office of the Treasurer of Our said State And all things required by law to be done to entitle the said BOARD to a grant of the fee simple of the said Land subject to the Reservations and Exceptions hereinafter contained have been done and performed **Now Know Ye** That for and in consideration of the said sum for and on Our behalf well and truly paid into the Treasury of Our said State before these Presents are issued and of all and singular the premises WE HAVE GRANTED and for Us Our Heirs and Successors DO HEREBY GRANT unto the said BOARD and its ~~Heirs and~~ Assigns Subject to the Reservations and Exceptions hereinafter contained ALL THAT Piece or Parcel of Land in Our said State containing by admeasurement five acres one rood be the same more or less situated in the County of Cumberland and Parish of Manly Cove at Oxford Falls Portion 1100 as shown in plan catalogued No. C.2722-2030 in the Department of Lands




Scale 4 Chains to an Inch.

As per plan hereon ~~in the margin hereof~~ With all the Rights and Appurtenances whatsoever thereto belonging To Hold unto the said BOARD and its ~~Heirs and~~ Assigns for ever Provided Nevertheless AND WE DO HEREBY RESERVE AND EXCEPT unto Us Our Heirs and Successors all minerals which the said Land contains with full power and authority for Us Our Heirs and Successors and such person or persons as shall from time to time he authorised hy Us or Them to enter upon the said Land and to search for mine dig and remove the said minerals And also all such parts and so much of the said Land as may hereafter he required for public ways viaducts canals railways tramways dams sewers or drains in over and through the same to he set out by Our Governor for the time-being of Our said State or some person hy him authorised in that respect And also all sand clay stone gravel and indigenous timher and all other materials the natural produce of the said Land which may he required at any time hereafter for the construction aud repair of any public ways bridges or canals or for naval purposes or railways and tramways or any fences emhankments viaducts dams sewers or drains necessary for the same together with the right of taking and removing all such materials hy such person or persons as may he authorised in that behalf hy Our Governor as aforesaid Provided Lastly AND WE DO HEREBY RESERVE for Us Our Heirs and Successors and for Our Governor as aforesaid hy such person or persons as shall he hy Us Them or him authorised in that hehalf full power to make and conduct through in under upon or over the said Land or anv portion thereof all puhlic ways viaducts railways tramways canals and all common or puhlic drains and sewers which may he deemed expedient And the right of full and free ingress egress and regress into out of and upon the said Land for the several purposes aforesaid or any of them In Testimony Whereof We have caused this Our Grant to he sealed with the Seal of Our said State the number "1920/4" on the sixth line hereof having been previously typed over an erasure

**Witness** Our Trusty and Well-beloved SIR JOHN NORTHCOTT, Knight Commander of Our Most Distinguished Order of Saint Michael and Saint George, Companion of Our Most Honourable Order of the Bath, Member of Our Royal Victorian Order, Lieutenant-General on the Retired List of Our Australian Military Forces, Governor of Our State of New South Wales and its Dependencies in the Commonwealth of Australia, at Sydney in Our said State, this twenty second — day of May — in the second year of Our Reign, and in the year of Our Lord one thousand nine hundred and fifty-three.

J. Palmer

Northcott.

Governor

Req:R319213 /Doc:CT 06670-129 CT /Rev:09-Aug-2012 /NSW LRS /Prt:30-Oct-2024 12:32 /Seq:2 of 2
© Office of the Registrar-General /Src:DirectInfo /Ref:DI-ES9402/3

RECORDED and ENROLLED in the Registrar General's Office, at Sydney, in New South Wales, this Fifteenth day of June 1953.

J. Wells
Registrar General.

*Attention is hereby directed to the provisions of Section 31 of the Closer Settlement Act, 1904, relating to transfer.*

No. F878087 CAVEAT dated 19th June 1953
by the Registrar General.
Produced 19th June 1953 and
entered 19th June 1953
at 4 hours 10 o'clock in the fore noon.
Regulation 5 under the Closer Settlement Acts.
J. Wells
REGISTRAR GENERAL

The within Caveat No. F878087 is hereby withdrawn
Dated 12th June 1970
Jawatson
REGISTRAR GENERAL

Edward Phillip Stainsby of Brookvale, Poultry Farmer
is now the registered proprietor of the land within described
See TRANSFER No. L869675 dated 27th March 1957
Entered 12th June 1970
Jawatson
REGISTRAR GENERAL

Lilian Mabel Covey of Manly and Winnifred Mary Blackett of Allambie Heights both Married Women as joint tenants are
now the registered proprietors of the land within described
See Section 94 Application No. L869676
Entered 12th June 1970
Jawatson
REGISTRAR GENERAL

No. L869677 CAVEAT by the Registrar General.
Entered 12th June 1970
Jawatson
REGISTRAR GENERAL

The within Caveat No. L869677 is hereby withdrawn
Dated 9th September 1971.
Jawatson
REGISTRAR GENERAL

Arthur Barry Nesbitt of Sydney, Company Director is
now the registered proprietor of the land within described
See TRANSFER No. M371329 dated 26th July 1971.
Entered 9th September 1971
Jawatson
REGISTRAR GENERAL

No. M371330 MORTGAGE dated 26th July 1971
to Lilian Mabel Covey of Manly and Winnifred Mary Blackett of Allambie Heights, Married Women
Entered 9th September 1971
Discharged P844107 16-8-1976
Jawatson
REGISTRAR GENERAL

REGISTERED PROPRIETOR Robert Fulton and Anne Patricia Fulton as joint tenants by Transfer F670651 Registered 5-8-1983
REGISTRAR GENERAL

F670652 Mortgage to Arthur Barry Nesbitt Registered 5-8-1983
Discharged V99211 14-5-1984
REGISTRAR GENERAL

V99212 Mortgage to Commonwealth Savings Bank of Australia Registered 14-5-1984
Discharged V460875 3-12-1984
REGISTRAR GENERAL

REGISTERED PROPRIETOR Anne Patricia Fulton. Fulton by Transfer V460876. Registered 3-12-1984
REGISTRAR GENERAL

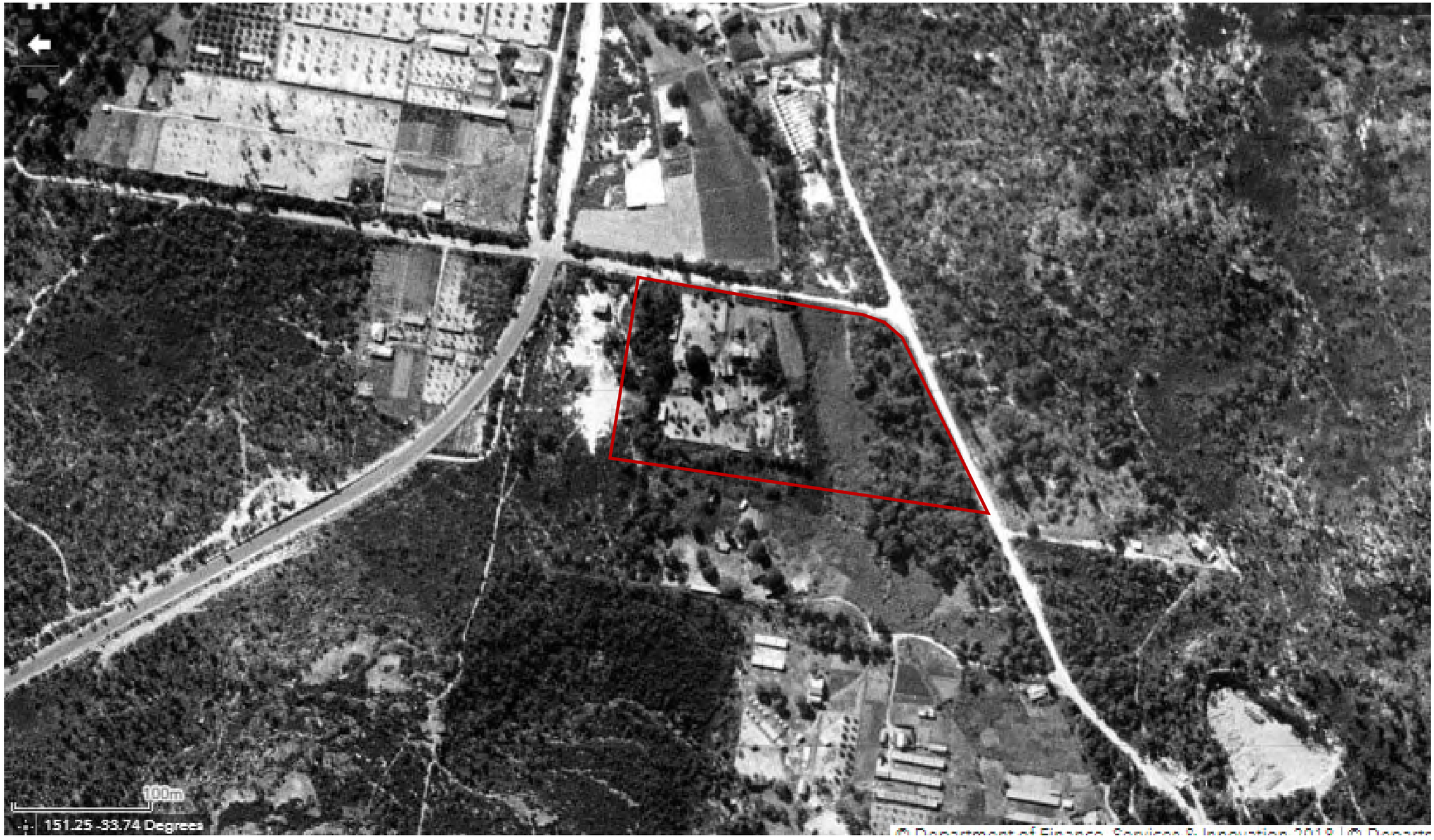
V460877 Mortgage to Commonwealth Savings Bank of Australia. Registered 3-12-1984
The land in this dealing is not comprised in Vol. 5310 Fol. 4
REGISTRAR GENERAL

# APPENDIX E

## HISTORICAL AERIAL PHOTOGRAPHS

Aargus

# HISTORICAL AERIAL PHOTOGRAPHS - 1943




| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Investigation | **Figure No.** | 1 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A3 |
| **Client** | Queenwood School for Girls LTD | **Drawn by** | SK | **Date** | 31.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# HISTORICAL AERIAL PHOTOGRAPHS - 1970




| PROJECT DETAILS | | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|---|
| **Project Title** | Detailed Site Investigation | | **Figure No.** | 2 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | | **Scale** | As above | **Size** | A3 |
| **Client** | Queenwood School for Girls LTD | | **Drawn by** | SK | **Date** | 31.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | | **Approved by** | MK | **Date** | 31.10.2024 |

# HISTORICAL AERIAL PHOTOGRAPHS - 1982




| PROJECT DETAILS | | DRAWING DETAILS | | | |
|---|---|---|---|---|---|
| **Project Title** | Detailed Site Investigation | **Figure No.** | 3 | **Rev No.** | 0 |
| **Project No.** | ES9402/3 | **Scale** | As above | **Size** | A3 |
| **Client** | Queenwood School for Girls LTD | **Drawn by** | SK | **Date** | 31.10.2024 |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW | **Approved by** | MK | **Date** | 31.10.2024 |

# HISTORICAL AERIAL PHOTOGRAPHS - 1991




| PROJECT DETAILS | |
|---|---|
| **Project Title** | Detailed Site Investigation |
| **Project No.** | ES9402/3 |
| **Client** | Queenwood School for Girls LTD |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW |

| DRAWING DETAILS | | | |
|---|---|---|---|
| **Figure No.** | 4 | **Rev No.** | 0 |
| **Scale** | As above | **Size** | A3 |
| **Drawn by** | SK | **Date** | 31.10.2024 |
| **Approved by** | MK | **Date** | 31.10.2024 |

# HISTORICAL AERIAL PHOTOGRAPHS - 2004




| PROJECT DETAILS | |
|---|---|
| **Project Title** | Detailed Site Investigation |
| **Project No.** | ES9402/3 |
| **Client** | Queenwood School for Girls LTD |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW |

| DRAWING DETAILS | | | |
|---|---|---|---|
| **Figure No.** | 5 | **Rev No.** | 0 |
| **Scale** | As above | **Size** | A3 |
| **Drawn by** | SK | **Date** | 31.10.2024 |
| **Approved by** | MK | **Date** | 31.10.2024 |

# HISTORICAL AERIAL PHOTOGRAPHS - 2024




| PROJECT DETAILS | |
|---|---|
| **Project Title** | Detailed Site Investigation |
| **Project No.** | ES9402/3 |
| **Client** | Queenwood School for Girls LTD |
| **Site Address** | 1100 Oxford Falls Road, Oxford Falls NSW |

| DRAWING DETAILS | | | |
|---|---|---|---|
| **Figure No.** | 6 | **Rev No.** | 0 |
| **Scale** | As above | **Size** | A3 |
| **Drawn by** | SK | **Date** | 31.10.2024 |
| **Approved by** | MK | **Date** | 31.10.2024 |

# APPENDIX F

## NSW EPA / SAFEWORK NSW RECORDS

Aargus

## Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the ***Contaminated Land Management Act 1997*** (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under ***Government Information (Public Access) Act 2009***.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

## Frequently asked questions

**Why does my land appear on the list of notified sites?**

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

**Does the list contain all contaminated sites in NSW?**

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

**How are notified contaminated sites managed by the EPA?**

There are different ways the EPA can manage notified contaminated sites. Options include:

• regulation under the CLM Act, POEO Act, or both
• notifying the relevant planning authority for management under the planning and development process
• managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

**What should I do if I am a potential buyer of a site that appears on the list?**

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

**Who can I contact if I need more information about a site?**

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

## List of NSW Contaminated Sites Notified to the EPA

**Disclaimer**

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

| Site Status | Explanation |
|---|---|
| Under assessment | The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or *Protection of the Environment Operations Act 1997*. |
| Under Preliminary Investigation Order | The EPA has issued a Preliminary Investigation Order under s10 of the *Contaminated Land Management Act 1997*, to obtain additional information needed to complete the assessment. |
| Regulation under CLM Act not required | The EPA has completed an assessment of the contamination and decided that regulation under the *Contaminated Land Management Act 1997* is not required. |

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| Regulation being finalised | The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. A regulatory approach is being finalised. |
| Contamination currently regulated under CLM Act | The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record. |
| Contamination currently regulated under POEO Act | Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register. |
| Contamination being managed via the planning process (EP&A Act) | The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the *Environmental Planning and Assessment Act 1979* (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment. |
| Contamination formerly regulated under the CLM Act | The EPA has determined that the contamination is no longer significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (CLM Act). The contamination was addressed under the CLM Act. |
| Contamination formerly regulated under the POEO Act | The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the *Protection of the Environment Operations Act 1997* (POEO Act). |

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| Contamination was addressed via the planning process (EP&A Act) | The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the *Environmental Planning and Assessment Act 1979* (EP&A Act). |
| Ongoing maintenance required to manage residual contamination (CLM Act) | The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record. |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ABBOTSFORD | Former Gasworks | 83 Wymston PARADE | Gasworks | Contamination formerly regulated under the CLM Act | -33.85288351 | 151.1265979 |
| ABBOTSFORD | Former Gasworks | 82, 83, 84 Wymston Pde, & 37, 39, 43, 45 St Albans STREET | Gasworks | Contamination formerly regulated under the CLM Act | -33.85288316 | 151.1267729 |
| ABBOTSFORD | Former Gasworks | 43 St Albans STREET | Gasworks | Contamination formerly regulated under the CLM Act | -33.85270604 | 151.126976 |
| ABBOTSFORD | Former Gasworks | 85 Wymston PARADE | Gasworks | Regulation under CLM Act not required | -33.85265214 | 151.1266277 |
| ABBOTSFORD | Former Gasworks | 80-81 Wymston Pde and 35 and 41 St Albans STREET | Gasworks | Regulation under CLM Act not required | -33.85306653 | 151.1268142 |
| ABERDEEN | Former Transport Depot | 87-89 St Andrew STREET | Other Industry | Regulation under CLM Act not required | -32.17160931 | 150.8972859 |
| ABERMAIN | Former Abermain Landfill | Albury STREET | Landfill | Under assessment | -32.805018 | 151.420156 |
| ALBION PARK | Caltex Albion Park Service Station | 1 Calderwood ROAD | Service Station | Regulation under CLM Act not required | -34.57131362 | 150.7647971 |
| ALBION PARK RAIL | Caltex Service Station | 174 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.56134097 | 150.7953663 |
| ALBION PARK RAIL | Caltex Service Station | 31 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.55162786 | 150.7880626 |
| ALBION PARK RAIL | Former Timber Storage Area | 36 Rivulet CRESCENT | Other Industry | Regulation under CLM Act not required | -34.54872597 | 150.7899351 |
| ALBURY | Mobil Depot, Railway Place Albury | 1 Railway PLACE | Other Petroleum | Regulation under CLM Act not required | -36.08526805 | 146.9236999 |
| ALBURY | Former Thales Australia site, Albury | 161 Fallon STREET | Other Industry | Contamination formerly regulated under the CLM Act | -36.064966 | 146.9434831 |
| ALBURY | Woolworths Petrol | 515 Young STREET | Service Station | Regulation under CLM Act not required | -36.08073723 | 146.92351 |
| ALBURY | Former Caltex Service Station | 842 David STREET | Service Station | Regulation under CLM Act not required | -36.06398743 | 146.9252143 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ALBURY | SRA Land, 514 to 526 Young Street | 514 to 526 Young STREET | Other Petroleum | Regulation under CLM Act not required | -36.08084123 | 146.9241682 |
| ALBURY | Former Gasworks and surrounding commercial land | 441 Kiewa STREET | Gasworks | Contamination currently regulated under CLM Act | -36.08416926 | 146.9137704 |
| ALBURY | Coles Express Albury | 465 Guinea STREET | Service Station | Regulation under CLM Act not required | -36.07513665 | 146.9213077 |
| ALBURY | Xpress Service Station | 616-624 Young STREET | Service Station | Regulation under CLM Act not required | -36.0755401 | 146.9255668 |
| ALBURY | Albury Plaza | Cnr Smollett Street and Townsend STREET | Other Industry | Regulation under CLM Act not required | -36.08112933 | 146.9135719 |
| ALBURY | Mobil Albury Aviation Fuel Depot | Hangar 8 (Albury Airport), Ogden PLACE | Other Petroleum | Regulation under CLM Act not required | -36.07178139 | 146.9530165 |
| ALBURY | SRA Land | 448 and 452 Young STREET | Unclassified | Regulation under CLM Act not required | -36.08438605 | 146.9235454 |
| ALBURY | Caltex Service Station | Dean Street, Corner Creek STREET | Service Station | Regulation under CLM Act not required | -36.07978937 | 146.9110825 |
| ALEXANDRIA | Former Cadbury Schweppes | 49-59 O'Riordan STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.91406619 | 151.195067 |
| ALEXANDRIA | Former Mobil Service Station | 20 O'Riordan STREET | Service Station | Regulation under CLM Act not required | -33.9075539 | 151.2014811 |
| ALEXANDRIA | Caltex Alexandria Service Station | 133 Wyndham St, cnr McEvoy STREET | Service Station | Regulation under CLM Act not required | -33.90220927 | 151.2000425 |
| ALEXANDRIA | Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016) | 10-20 Botany ROAD | Service Station | Regulation under CLM Act not required | -33.89536227 | 151.1987818 |
| ALEXANDRIA | Mascot Developments | 494-504 Gardeners ROAD | Other Industry | Regulation under CLM Act not required | -33.9198218 | 151.191282 |
| ALEXANDRIA | Alexandria GoGas | 562 Botany ROAD | Service Station | Regulation under CLM Act not required | -33.91577222 | 151.2000753 |
| ALEXANDRIA | Australian Refined Alloys | 202-212 Euston ROAD | Metal Industry | Regulation under CLM Act not required | -33.91505136 | 151.185872 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ALEXANDRIA | Alexandra Canal Sediments | Off Huntley STREET | Other Industry | Contamination currently regulated under CLM Act | -33.92204213 | 151.1770009 |
| ALEXANDRIA | Australia Post | 10-24 Ralph STREET | Other Industry | Contamination was addressed via the planning process (EP&A Act) | -33.91583041 | 151.197997 |
| ALEXANDRIA | Perry Park | 1B Maddox STREET | Landfill | Regulation under CLM Act not required | -33.90809949 | 151.1962945 |
| ALEXANDRIA | Alexandria Gardens | 146-156 Wyndham Street & 146-156 Botany ROAD | Unclassified | Regulation under CLM Act not required | -33.89956961 | 151.1997377 |
| ALEXANDRIA | Sydney Park | Sydney Park ROAD | Landfill | Contamination currently regulated under CLM Act | -33.91031048 | 151.1844672 |
| ALEXANDRIA | Former Industrial Site (now Value Suites) | 16 O'Riordan STREET | Other Industry | Regulation under CLM Act not required | -33.9069796 | 151.201902 |
| ALEXANDRIA | 205-225 Euston Road, Alexandria | 205-225 Euston ROAD | Other Industry | Regulation under CLM Act not required | -33.9127872 | 151.1855565 |
| ALEXANDRIA | The Gentry Alexandria | 31-41 William STREET | Unclassified | Regulation under CLM Act not required | -33.91258565 | 151.1981861 |
| ALEXANDRIA | 6 - 8 Huntley Street Alexandria | 6 - 8 Huntley STREET | Metal Industry | Regulation under CLM Act not required | -33.90982985 | 151.1924567 |
| ALEXANDRIA | 566 Gardeners Road Alexandria | 566 Gardeners ROAD | Unclassified | Regulation under CLM Act not required | -33.91921186 | 151.1839188 |
| ALEXANDRIA | Metro Petroleum Alexandria Automotive Services | 36-46 Henderson ROAD | Service Station | Under assessment | -33.897376 | 151.197519 |
| ALLAWAH | Kempt Field | Durham Street / Roberts Lane LANE | Landfill | Under assessment | -33.968206 | 151.112779 |
| ALSTONVILLE | Caltex Service Station Alstonville | 73 Main STREET | Service Station | Regulation under CLM Act not required | -28.84115994 | 153.4388699 |
| AMBARVALE | Caltex Service Station | 37 Woodhouse DRIVE | Service Station | Regulation under CLM Act not required | -34.08438034 | 150.8019168 |
| ANNANDALE | 7-Eleven (former Mobil) Annandale Service Station | 198 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.88706434 | 151.1741135 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ANNANDALE | Shell Coles Express Service Station | 124-126 Johnston STREET | Service Station | Regulation under CLM Act not required | -33.88085651 | 151.1704805 |
| ANNANDALE | 67 Johnston Street, Annandale NSW 2038 | 67 Johnston STREET | Landfill | Regulation under CLM Act not required | -33.883155 | 151.170323 |
| APPIN | Elladale Creek Aqueduct Upper Canal | Macquariedale ROAD | Unclassified | Regulation under CLM Act not required | -34.18867067 | 150.7539597 |
| APPIN | West Cliff Colliery | Wedderburn ROAD | Other Petroleum | Regulation under CLM Act not required | -34.21970612 | 150.8217522 |
| ARDLETHAN | Landmark Fertiliser Storage Facility | 18 & 24-26 Ariah STREET | Chemical Industry | Regulation under CLM Act not required | -34.35696645 | 146.9007084 |
| ARGENTON | NSW Mines Rescue Services - Argenton | 533 Lake ROAD | Other Industry | Regulation under CLM Act not required | -32.93807208 | 151.6269664 |
| ARMIDALE | Former Mobil Depot | 132 Niagara STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -30.51115918 | 151.6490343 |
| ARMIDALE | RTA land adjoining Martin Street estate | Martin STREET | Other Industry | Contamination formerly regulated under the CLM Act | -30.50445941 | 151.6415415 |
| ARMIDALE | Martin Street, Crown Land | Martin STREET | Other Industry | Contamination formerly regulated under the CLM Act | -30.50414076 | 151.6429516 |
| ARMIDALE | Caltex Service Station | 146 Miller STREET | Service Station | Regulation under CLM Act not required | -30.51362759 | 151.6481123 |
| ARMIDALE | Shell Service Station | 93 Marsh STREET | Service Station | Regulation under CLM Act not required | -30.51299824 | 151.6697557 |
| ARMIDALE | Parklands near the former gasworks | Beardy Street and Allingham STREET | Gasworks | Regulation under CLM Act not required | -30.51013465 | 151.6652722 |
| ARMIDALE | Gasworks and portion of Harris Park | Corner of Beardy Street and Allingham STREET | Gasworks | Contamination currently regulated under CLM Act | -30.51157374 | 151.6623009 |
| ARMIDALE | Former Lot 3 Martin Street | 89 Martin STREET | Other Industry | Regulation under CLM Act not required | -30.50664682 | 151.64542 |
| ARMIDALE | Martin Street Estate | Martin STREET | Other Industry | Regulation under CLM Act not required | -30.50559024 | 151.6431854 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ARMIDALE | Caltex Armidale Girraween Service Station | 6-8 Queen Elizabeth DRIVE | Service Station | Regulation under CLM Act not required | -30.50348872 | 151.6510748 |
| ARMIDALE | Former Shell Depot | 134 Niagara STREET | Other Petroleum | Regulation under CLM Act not required | -30.51180178 | 151.6488634 |
| ARMIDALE | Caltex Service Station | 144 Marsh STREET | Service Station | Regulation under CLM Act not required | -30.51709925 | 151.6675802 |
| ARMIDALE | Caltex North Hill Service Station | 2-4 Marsh STREET | Service Station | Regulation under CLM Act not required | -30.50320439 | 151.6727051 |
| ARMIDALE | Mobil Armidale Service Station and Former Depot | 10-12 McLennan STREET | Service Station | Regulation under CLM Act not required | -30.51107573 | 151.648242 |
| ARMIDALE | Caltex Service Station | 19/10541 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -30.53210764 | 151.6160492 |
| ARMIDALE | Armidale Dumaresq Council Grafton Road Depot | 15-25 Grafton ROAD | Other Petroleum | Regulation under CLM Act not required | -30.52058076 | 151.6815261 |
| ARNCLIFFE | 7-Eleven Arncliffe | 28 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.93428397 | 151.1525438 |
| ARNCLIFFE | Combined Projects Arncliffe | 104-128 Princes HIGHWAY | Other Industry | Regulation under CLM Act not required | -33.93783874 | 151.1494559 |
| ARTARMON | 7-Eleven (former Mobil) Artarmon Service Station | 477 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.81053826 | 151.1774248 |
| ASHBURY | Wagener Oval Legacy Landfill | 14 Whitfield AVENUE | Landfill | Under assessment | -33.896823 | 151.118209 |
| ASHBY | Ashby Dry Dock | via Clarence STREET | Other Industry | Contamination formerly regulated under the CLM Act | -29.44158377 | 153.1972304 |
| ASHFIELD | 7-Eleven Ashfield | 132 Liverpool Road STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.89057897 | 151.1295498 |
| ASHFIELD | Vehicle Workshop | 445-449 Liverpool ROAD | Service Station | Regulation under CLM Act not required | -33.88826829 | 151.1167477 |
| ASQUITH | BP Service Station | 462 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.68982678 | 151.106156 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ATTUNGA | Attunga Limestone Mine (Waste Oil Site) | Garthowen ROAD | Other Industry | Regulation under CLM Act not required | -30.92920627 | 150.8579435 |
| AUBURN | Former Ajax Chemical Factory | 9 Short STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.83671601 | 151.0292071 |
| AUBURN | Department of Corrective Services land adjacent to the former Auburn Landfill | Jamieson STREET | Landfill | Contamination formerly regulated under the CLM Act | -33.82928257 | 151.0590653 |
| AUBURN | DIC Australia | 323 Chisholm ROAD | Other Industry | Regulation under CLM Act not required | -33.87228962 | 151.0157032 |
| AUBURN | Janyon | Manchester ROAD | Other Industry | Regulation under CLM Act not required | -33.84467826 | 151.020745 |
| AUBURN | Maintrain Facility - Sydney Trains Auburn | Manchester ROAD | Other Industry | Regulation under CLM Act not required | -33.84410947 | 151.0242502 |
| AUBURN | Commercial Premises | 11-13 Percy STREET | Other Industry | Under assessment | -33.85021046 | 151.0410097 |
| AWABA | Awaba Colliery | Wilton ROAD | Other Industry | Regulation under CLM Act not required | -33.02098186 | 151.5383612 |
| BALGOWLAH | BP Service Station | Cnr Sydney Road and Maretimo STREET | Service Station | Regulation under CLM Act not required | -33.79546175 | 151.2559309 |
| BALGOWLAH | Part of Manly Council Maintenance Depot | 8-10 Roseberry STREET | Other Petroleum | Regulation under CLM Act not required | -33.78928907 | 151.2679557 |
| BALGOWNIE | Fuel Power Plus | 99 Balgownie ROAD | Service Station | Contamination currently regulated under POEO Act | -34.38925632 | 150.8808544 |
| BALLINA | Former Mobil Service Station | 37-41 Cherry STREET | Service Station | Regulation under CLM Act not required | -28.86952673 | 153.5624436 |
| BALLINA | Ballina Shell | 273 River STREET | Service Station | Regulation under CLM Act not required | -28.86809272 | 153.5552789 |
| BALLINA | Woolworths Petrol | Kerr STREET | Service Station | Regulation under CLM Act not required | -28.85824461 | 153.5605439 |
| BALLINA | Ballina Mays Motors | River STREET | Other Petroleum | Regulation under CLM Act not required | -28.86935402 | 153.5585931 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BALLINA | Fripp Oval and former Ballina RSL Bowling Club | 31 Canal ROAD | Cattle Dip | Regulation under CLM Act not required | -28.86132941 | 153.5499106 |
| BALRANALD | Caltex Service Station | Sturt HIGHWAY | Service Station | Regulation under CLM Act not required | -34.66747746 | 143.5662034 |
| BANKSIA | Woolworths Petrol Service Station Banksia | 314 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.94567308 | 151.1416884 |
| BANKSIA | Cooks Cove Development | Cooks Cove PARK | Landfill | Regulation under CLM Act not required | -33.94492759 | 151.1549947 |
| BANKSMEADOW | Orica Botany Groundwater Project | 16-20 Beauchamp ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -33.95526361 | 151.2152005 |
| BANKSMEADOW | Discovery Cove, Former Ampol Rail Terminal | 1801 Botany ROAD | Other Petroleum | Regulation being finalised | -33.96162178 | 151.2184122 |
| BANKSMEADOW | Caltex Terminal | 1-3 Penrhyn ROAD | Other Petroleum | Contamination currently regulated under POEO Act | -33.96335328 | 151.2171062 |
| BANKSMEADOW | Orica Botany (Pre-2003 Regulation) | Denison STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.9516159 | 151.2195804 |
| BANKSMEADOW | Veolia Waste Transfer Terminal (former Keith Engineering site) | 34-36 McPherson STREET | Other Industry | Regulation under CLM Act not required | -33.95811039 | 151.2195225 |
| BANKSMEADOW | Orica Former Chlor Alkali Plant (same site as Orica Botany Groundwater Project) | Botany Industrial Park, off Denison STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.95664283 | 151.221685 |
| BANKSMEADOW | Former Pipeline | Corish CIRCLE | Other Petroleum | Regulation being finalised | -33.94705787 | 151.2209919 |
| BANKSMEADOW | Pacific National Rail Siding | 1 Beauchamp ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -33.95757712 | 151.2204974 |
| BANKSMEADOW | Former Mobil Banksmeadow Terminal | Coal Pier ROAD | Other Petroleum | Regulation under CLM Act not required | -33.95405624 | 151.2142048 |
| BANKSMEADOW | Orica Car Park Waste Encapsulation | Corish CIRCLE | Landfill | Contamination formerly regulated under the POEO Act | -33.94703665 | 151.22083 |
| BANKSTOWN | 7-Eleven Service Station | 689 Henry Lawson DRIVE | Service Station | Regulation under CLM Act not required | -33.92749953 | 150.9804784 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BANORA POINT | Caltex Service Station | Corner Leisure Drive and Darlington DRIVE | Service Station | Regulation under CLM Act not required | -28.21390712 | 153.5417434 |
| BARGO | Tahmoor Colliery | Remembrance DRIVE | Other Industry | Regulation under CLM Act not required | -34.25090795 | 150.5793631 |
| BARMEDMAN | Caltex - Barmedman | Corner Watson Street and Star STREET | Other Petroleum | Regulation under CLM Act not required | -34.14351302 | 147.3824934 |
| BARRACK HEIGHTS | Caltex Service Station | 332-336 Shellharbour ROAD | Service Station | Regulation under CLM Act not required | -34.56489171 | 150.8597814 |
| BASS HILL | Woolworths Caltex Bass Hill | 862 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.9008648 | 150.9991181 |
| BATEAU BAY | Former landfill | The Entrance ROAD | Landfill | Contamination currently regulated under CLM Act | -33.3938305 | 151.4699046 |
| BATEAU BAY | Woolworths Service Station Bateau Bay | 9 Bay Village ROAD | Service Station | Regulation under CLM Act not required | -33.37316432 | 151.4737125 |
| BATEHAVEN | Caltex Service Station | 264 Beach ROAD | Service Station | Regulation under CLM Act not required | -35.73255166 | 150.1997536 |
| BATEHAVEN | Coles Express Service Station Batehaven | 198 Beach ROAD | Service Station | Regulation under CLM Act not required | -35.72671807 | 150.1944931 |
| BATEMANS BAY | Caltex Service Station | 87-89 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.71940701 | 150.1762788 |
| BATHURST | Former Police Station | Corner of William Street and Durham STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -33.41592424 | 149.5842233 |
| BATHURST | Former Gasworks | 71 Russell STREET | Gasworks | Contamination formerly regulated under the CLM Act | -33.42420302 | 149.5864517 |
| BATHURST | Shell Coles Express Service Station | (Cnr Stewart and Rocket Street) 298 Stewart STREET | Service Station | Regulation under CLM Act not required | -33.41910999 | 149.5677773 |
| BATHURST | Former Shell Depot Bathurst | 56 Bant STREET | Other Petroleum | Regulation under CLM Act not required | -33.43471575 | 149.5774595 |
| BATHURST | Bathurst Rail Fabrication Centre | 34 Alpha STREET | Other Industry | Regulation under CLM Act not required | -33.42805153 | 149.5829156 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BATHURST | Bathurst - Former Caltex Depot | 114 Howick STREET | Other Petroleum | Regulation under CLM Act not required | -33.42296963 | 149.5862574 |
| BATHURST | Caltex Bathurst Service Station | 53 Durham STREET | Service Station | Regulation under CLM Act not required | -33.41689545 | 149.5848527 |
| BATHURST | Former Mobil Depot | 1 Lambert STREET | Other Petroleum | Regulation under CLM Act not required | -33.42875534 | 149.5806344 |
| BATHURST | Crago Mill site | Piper STREET | Other Industry | Regulation under CLM Act not required | -33.42777602 | 149.5809428 |
| BATHURST | Former Mobil Depot | Lower Russell STREET | Other Petroleum | Regulation under CLM Act not required | -33.42497876 | 149.585128 |
| BATHURST | Shell Coles Express Bathurst Service Station | 59 Durham STREET | Service Station | Regulation under CLM Act not required | -33.41639415 | 149.5843243 |
| BATHURST | Former Devro Cattle Hide Processing Plant | 46 Vale ROAD | Other Industry | Regulation under CLM Act not required | -33.43926137 | 149.5803563 |
| BATHURST | Bathurst Engineering Depot | Lot 1 Keppel STREET | Landfill | Regulation under CLM Act not required | -33.426436 | 149.582134 |
| BATHURST | Former Station Masters Cottage | Corner Havannah and Keppel STREET | Other Industry | Under assessment | -33.424936 | -33.424936 |
| BATLOW | Crown Reserves | Mill ROAD | Other Industry | Regulation under CLM Act not required | -35.52355132 | 148.1505729 |
| BAULKHAM HILLS | Caltex Baulkham Hills Service Station | 117 Seven Hills ROAD | Service Station | Regulation under CLM Act not required | -33.76139872 | 150.9750767 |
| BAULKHAM HILLS | Caltex Service Station | 130 Seven Hills ROAD | Service Station | Regulation under CLM Act not required | -33.76180431 | 150.9746297 |
| BAULKHAM HILLS | Shell Coles Express Service Station | 363 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.7601819 | 150.9916224 |
| BAULKHAM HILLS | IBM Baulkham Hills Data Centre | 3 Brookhollow AVENUE | Other Petroleum | Regulation under CLM Act not required | -33.73252699 | 150.9680221 |
| BAULKHAM HILLS | Parraweena Reserve | Parraweena AVENUE | Landfill | Under assessment | -33.752672 | 151.00123 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BEACON HILL | Caltex Service Station | 176 Warringah ROAD | Service Station | Contamination currently regulated under CLM Act | -33.75381485 | 151.2602617 |
| BEACON HILL | Former 7-Eleven Service Station, Beacon Hill | 312 Warringah ROAD | Service Station | Regulation under CLM Act not required | -33.75129647 | 151.2469656 |
| BEACONSFIELD | 63-85 Victoria St, Beaconsfield | 63-85 Victoria STREET | Other Industry | Regulation under CLM Act not required | -33.9102929 | 151.2016275 |
| BEGA | Coles Express (former Caltex) Service Station | 2-6 Swan (Corner Carp) STREET | Service Station | Regulation under CLM Act not required | -36.67388263 | 149.838163 |
| BEGA | Former BP Service Station | 100 - 102 Gipps STREET | Service Station | Regulation under CLM Act not required | -36.67563094 | 149.8433291 |
| BEGA | Former Bega Gasworks | 19-29 Upper STREET | Gasworks | Under preliminary investigation order | -36.67710613 | 149.8480253 |
| BEGA | Caltex Service Station | 36-40 Lagoon STREET | Service Station | Regulation under CLM Act not required | -36.66832965 | 149.8289048 |
| BEGA | Lands Adjoining the Former Bega Gasworks | Part of Upper, East, Gordon & Gloucester STREET | Gasworks | Under preliminary investigation order | -36.67704706 | 149.848425 |
| BEGA | Spenco Site - owned by Bega Spotlight Property 2 Pty Ltd | 53-65 Bega Street STREET | Other Industry | Regulation under CLM Act not required | -36.67135539 | 149.8450828 |
| BELLA VISTA | 2-6 Norbrik Drive, Bella Vista NSW | 2-6 Norbrik DRIVE | Unclassified | Regulation under CLM Act not required | -33.745597 | 150.950491 |
| BELMONT | Coles Express Belmont Service Station | 502 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.03317155 | 151.6605194 |
| BELMONT | Former Ampol Service Station | 467-469 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.0299728 | 151.6613301 |
| BELMONT NORTH | Woolworths Service Station Belmont North | 399 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.02454211 | 151.6634893 |
| BELMONT NORTH | Caltex Belmont North Service Station | 406 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.02476876 | 151.6623655 |
| BELMONT NORTH | Belmont Bus Depot | 2 Floraville ROAD | Other Petroleum | Regulation under CLM Act not required | -33.02476269 | 151.6606657 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BELMORE | SRA Land | 348 Burwood ROAD | Unclassified | Regulation under CLM Act not required | -33.91753611 | 151.0859487 |
| BELMORE | 7-Eleven Service Station | 792-794 Canterbury ROAD | Service Station | Regulation under CLM Act not required | -33.92567992 | 151.0873469 |
| BELROSE | Glenrose Shopping Centre | 56-58 Glen STREET | Unclassified | Contamination currently regulated under CLM Act | -33.73917996 | 151.2101029 |
| BELROSE | Woolworths Petrol | 60 Glen STREET | Service Station | Regulation under CLM Act not required | -33.74009002 | 151.2091045 |
| BELROSE | Caltex Service Station | 157 Forest WAY | Service Station | Regulation under CLM Act not required | -33.7347675 | 151.2212004 |
| BENNETTS GREEN | Former Windale Wastewater Treatment Works | 8 Templar PLACE | Other Industry | Regulation under CLM Act not required | -33.00317523 | 151.6936636 |
| BERESFIELD | BP Beresfield Truckstop | 2 Kinta Drive, corner John Renshaw DRIVE | Service Station | Regulation under CLM Act not required | -32.81122768 | 151.6393427 |
| BERESFIELD | Former Koppers Timber Treatment Site | 53 Weakleys DRIVE | Other Industry | Regulation under CLM Act not required | -32.79902937 | 151.6358846 |
| BERKELEY VALE | Former Berkeley Vale Service Station | 121-123 Lakedge AVENUE | Service Station | Regulation under CLM Act not required | -33.34899186 | 151.4423109 |
| BERKSHIRE PARK | Shell Coles Express Berkshire Park | 746 - 752 Richmond ROAD | Service Station | Regulation under CLM Act not required | -33.66508654 | 150.7990243 |
| BEROWRA | Caltex Berowra Service Station | 12-14 Berowra Waters ROAD | Service Station | Regulation under CLM Act not required | -33.6233827 | 151.1505554 |
| BEROWRA | 7-Eleven Berowra Service Station | 965-969 Pacific (Cnr Waratah Rd) HIGHWAY | Service Station | Regulation under CLM Act not required | -33.62673163 | 151.1479171 |
| BEROWRA | Shell Coles Express Berowra | 955 Pacific (Cnr Yallambee Rd) HIGHWAY | Service Station | Regulation under CLM Act not required | -33.62818015 | 151.1475736 |
| BEROWRA | 42 Berowra Waters Road | 42 Berowra Waters ROAD | Unclassified | Regulation under CLM Act not required | -33.6203823 | 151.1481246 |
| BERRIGAN | Caltex Service Station Berrigan | 155-165 Chanter STREET | Service Station | Regulation under CLM Act not required | -35.6557616 | 145.8015557 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BERRY | Berry Service Centre - Shell Branded | 88 Queen STREET | Service Station | Regulation under CLM Act not required | -34.77571634 | 150.6961713 |
| BERRY | Former Service Station Berry | 75 Queen STREET | Service Station | Contamination formerly regulated under the POEO Act | -34.77500516 | 150.695167 |
| BEXLEY | 7-Eleven Bexley | 474 Forest ROAD | Service Station | Regulation under CLM Act not required | -33.95160096 | 151.1252355 |
| BEXLEY | 7-Eleven (former Mobil) Service Station Bexley | 613 Forest ROAD | Service Station | Regulation under CLM Act not required | -33.95539246 | 151.118447 |
| BILAMBIL HEIGHTS | Former Banana Plantation Land | 38 McAllisters ROAD | Other Industry | Regulation under CLM Act not required | -28.21218056 | 153.4778762 |
| BILLINUDGEL | CSR Readymix | Mogo PLACE | Other Industry | Regulation under CLM Act not required | -28.50210255 | 153.5278161 |
| BILLINUDGEL | Billinudgel General Store | 2A Wilfred STREET | Service Station | Under assessment | -28.50210255 | 153.5278161 |
| BLACKMANS FLAT | Mount Piper Extension Development Site | 2847 Boulder ROAD | Other Industry | Regulation under CLM Act not required | -33.35619968 | 150.0279881 |
| BLACKMANS FLAT | Western Coal Services (former Lamberts Gully Mine) | Castlereagh HIGHWAY | Other Industry | Regulation under CLM Act not required | -33.36713827 | 150.0483236 |
| BLACKTOWN | Former Caltex Service Station | 131 Richmond ROAD | Service Station | Regulation under CLM Act not required | -33.75866104 | 150.8962614 |
| BLACKTOWN | Valspar Blacktown | 4 Steel STREET | Chemical Industry | Regulation under CLM Act not required | -33.75425018 | 150.9127714 |
| BLACKTOWN | Harpers Bush (Reserve 752) | Reservoir ROAD | Unclassified | Regulation under CLM Act not required | -33.79119448 | 150.8967838 |
| BLACKTOWN | 7-Eleven Service Station | 60 Walters ROAD | Service Station | Regulation under CLM Act not required | -33.77599783 | 150.8948926 |
| BLAKEHURST | Woolworths Service Station Blakehurst | 390 Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.99019694 | 151.1135663 |
| BLAKEHURST | The Bay Nursing Home | 392 & 394 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.99030465 | 151.1140293 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BLAXLAND | 7-Eleven (former Mobil) Service Station | 137 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.74627 | 150.6137669 |
| BOAMBEE | Lindsay Bros transport depot site | 542 Pacific HIGHWAY | Other Petroleum | Regulation under CLM Act not required | -30.33106848 | 153.0802985 |
| BOAMBEE | BP-branded (former Mobil) Boambee Service Station | 601 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -30.33544287 | 153.0817266 |
| BOBS FARM | Bob's Farm | 15 Fenningham Island ROAD | Other Industry | Regulation under CLM Act not required | -32.74867207 | 152.0316217 |
| BOGGABILLA | Former Caltex Service Station | 90 Simpson Street, corner Newell HIGHWAY | Service Station | Regulation under CLM Act not required | -28.60654029 | 150.3571056 |
| BOGGABILLA | Lowes (Former Mobil) Depot | Newell HIGHWAY | Other Petroleum | Regulation under CLM Act not required | -28.61023985 | 150.3529156 |
| BOMADERRY | Commercial Land | 320 Princes HIGHWAY | Other Industry | Contamination formerly regulated under the CLM Act | -34.84424073 | 150.5958149 |
| BOMADERRY | Caltex Service Station | 341 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.84561952 | 150.5946978 |
| BOMADERRY | Caltex Service Station Bomaderry | 246 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.83833824 | 150.5958799 |
| BOMADERRY | Former Mobil Emoleum Depot | 7 Victa WAY | Other Petroleum | Regulation under CLM Act not required | -34.84454618 | 150.6139462 |
| BOMADERRY | Former Shell Depot | 44 Railway STREET | Other Petroleum | Regulation under CLM Act not required | -34.85193621 | 150.6117038 |
| BOMADERRY | SRA Land | Lot 2 Meroo STREET | Unclassified | Regulation under CLM Act not required | -34.85314813 | 150.6099573 |
| BOMADERRY | Bomaderry Works Depot | 10 McIntyre WAY | Other Petroleum | Regulation under CLM Act not required | -34.84576748 | 150.6131411 |
| BOMBALA | Caltex Service Station Bombala | 159-161 Maybe STREET | Service Station | Regulation under CLM Act not required | -36.91234945 | 149.2374622 |
| BOMBALA | Former Bright Street Timber Mill | Bright STREET | Other Industry | Regulation under CLM Act not required | -36.91547645 | 149.2302454 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BOMBALA | Ampol Bombala Fuel Depot - Site 23465 (formerly Caltex Bombala Service Station) | Corner High Street and Monaro Highway STREET | Other Petroleum | Under assessment | -36.90447935 | 149.241292 |
| BOMBALA | Prime Pine site | Sandy LANE | Other Industry | Regulation under CLM Act not required | -36.9315425 | 149.2110959 |
| BOMBALA | Bombala former Sleeper Yard | Mahratta STREET | Landfill | Under assessment | -36.906938 | 149.239809 |
| BOMBO | N/A | Riverside DRIVE | Landfill | Under assessment | -34.6501 | 150.854979 |
| BOMEN | Caltex Terminal | 34 Lewington STREET | Other Petroleum | Regulation under CLM Act not required | -35.0700202 | 147.4121955 |
| BOMEN | Enirgi Power Storage Recycling | 509 Byrnes ROAD | Other Industry | Regulation under CLM Act not required | -35.05985094 | 147.4283765 |
| BONDI | BP-branded Service Station | 185 Bondi ROAD | Service Station | Regulation under CLM Act not required | -33.89432208 | 151.2647671 |
| BONDI | Caltex Service Station Bondi | 51 Bondi ROAD | Service Station | Regulation under CLM Act not required | -33.8936307 | 151.260001 |
| BONDI | Woolworths Metro Bondi | 137-149 Bondi ROAD | Other Industry | Regulation under CLM Act not required | -33.893966 | 151.263073 |
| BONDI JUNCTION | Waverley Bus Depot | 1-15 Oxford STREET | Other Industry | Regulation under CLM Act not required | -33.89165341 | 151.2421246 |
| BONNY HILLS | Bonny View Store | 923 Ocean DRIVE | Service Station | Regulation under CLM Act not required | -31.59075636 | 152.8392935 |
| BONNYRIGG | Metro (Formerly United & AP SAVER) Service Station Bonnyrigg | 709 Cabramatta (W) ROAD | Service Station | Regulation under CLM Act not required | -33.89297085 | 150.8925935 |
| BONNYRIGG HEIGHTS | BP-Branded Service Station Bonnyrigg | 451 North Liverpool ROAD | Service Station | Regulation under CLM Act not required | -33.89416327 | 150.8578378 |
| BOOLAROO | Incitec Pivot | 13 Main STREET | Other Industry | Contamination formerly regulated under the CLM Act | -32.94803538 | 151.6302187 |
| BOOLAROO | Bunnings Site - Pasminco Cockle Creek | 13a Main ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -32.94364503 | 151.6252316 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BOOLAROO | Part Lot 2 DP1127713 (proposed Lot G) - Pasminco Cockle Creek Smelter site | 13a Main ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -32.94404392 | 151.6267695 |
| BOOLAROO | Lot 600 DP1228699 (formerly Part Lot 2 DP1127713 & proposed 'Lot D') - Pasminco Cockle Creek Smelter site | Main ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -32.94440875 | 151.6264143 |
| BOOLAROO | Cardiff West Estate - Pasminco Cockle Creek | Adjacent to PCC Smelter at 13A Main ROAD | Metal Industry | Regulation under CLM Act not required | -32.93950137 | 151.6349183 |
| BOOLAROO | Cockle Creek and Cockle Bay Sediments | Off Creek Reserve ROAD | Metal Industry | Contamination currently regulated under CLM Act | -32.96079541 | 151.6141327 |
| BOOLAROO | Lake Macquarie Ciy Council Works Depot | Creek Reserve ROAD | Service Station | Regulation under CLM Act not required | -32.9524489 | 151.6164604 |
| BOOLAROO | Pasminco Cockle Creek Smelter | Lake ROAD | Metal Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -32.94434593 | 151.6307345 |
| BOOROWA | Former Mobil Depot | 14-16 Brial STREET | Other Petroleum | Regulation under CLM Act not required | -34.43673234 | 148.7300821 |
| BOOROWA | Mobil Service Station | 63-69 Marsden STREET | Service Station | Contamination formerly regulated under the CLM Act | -34.44157331 | 148.7162391 |
| BOOROWA | Boorowa Service Station | 84 Marsden STREET | Service Station | Regulation under CLM Act not required | -34.44302227 | 148.7151026 |
| BORENORE | Borenore railway cottage | 1348 Escort WAY | Unclassified | Under assessment | -33.241667 | 148.973716 |
| BOTANY | Former Aerosols of Australia | 1617 Botany ROAD | Chemical Industry | Regulation under CLM Act not required | -33.9529386 | 151.2037468 |
| BOTANY | Allnex | 49-61 Stephen ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -33.9524442 | 151.2106446 |
| BOTANY | Former Tannery | 2 Daniel STREET | Other Industry | Regulation under CLM Act not required | -33.94126194 | 151.1991087 |
| BOTANY | Botany, Underwood | 14a Underwood AVENUE | Unclassified | Contamination being managed via the planning process (EP&A Act) | -33.94508532 | 151.1947626 |
| BOTANY | Roads and Maritime Service | 5 - 9 Lord STREET | Other Industry | Regulation under CLM Act not required | -33.94100279 | 151.1968763 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BOTANY | Former Industrial Site | 28 Folkestone PARADE | Unclassified | Contamination being managed via the planning process (EP&A Act) | -33.95187539 | 151.1960537 |
| BOURKE | Ampol Bourke Service Station | 82-86 Anson STREET | Service Station | Regulation under CLM Act not required | -30.09500388 | 145.9414388 |
| BOURKE | Former Shell Bourke Depot | 94-106 Anson STREET | Service Station | Regulation under CLM Act not required | -30.09548497 | 145.9436745 |
| BOWENFELS | Bowenfels Field Support Centre | 9-13 Cooerwull ROAD | Other Petroleum | Regulation under CLM Act not required | -33.47514572 | 150.1323899 |
| BOWRAL | Shell Coles Express Bowral Service Station | 430 Bong Bong STREET | Service Station | Regulation under CLM Act not required | -34.48269596 | 150.417389 |
| BOWRAL | Former Gasworks | Merrigang STREET | Gasworks | Contamination currently regulated under CLM Act | -34.4783957 | 150.4255053 |
| BOX HILL | Former Waste Management Facility | 25 Terry ROAD | Landfill | Regulation under CLM Act not required | -33.65559259 | 150.8977986 |
| BOX HILL | Former Poultry Farm | 27-33 Boundary ROAD | Other Industry | Regulation under CLM Act not required | -33.64866563 | 150.8815467 |
| BOX HILL | Former Poultry Farm | 19-25 Boundary ROAD | Other Industry | Regulation under CLM Act not required | -33.65038071 | 150.8813725 |
| BRANXTON | Former Service Station Branxton | Part of 70 Maitland STREET | Service Station | Contamination currently regulated under CLM Act | -32.65631582 | 151.3516243 |
| BRANXTON | Branxton Wastewater Treatment Works | 2151 New England HIGHWAY | Other Industry | Regulation under CLM Act not required | -32.66069944 | 151.3625572 |
| BRANXTON | N/A | 83 & 83A Maitland STREET | Landfill | Under assessment | -32.652813 | 151.347313 |
| BREWARRINA | Dowell's Fuel | 39 Doyle STREET | Service Station | Regulation under CLM Act not required | -29.96152786 | 146.8612561 |
| BRIGHTON-LE-SANDS | Shell Service Station Brighton Le Sands & adjacent land | 2 General Holmes DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -33.95791132 | 151.1576486 |
| BRIGHTON-LE-SANDS | Cook Park | General Holmes DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -33.9581072 | 151.1579572 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BROADMEADOW | Former Industrial Site | 16 Broadmeadow ROAD | Service Station | Regulation under CLM Act not required | -32.91444096 | 151.7300112 |
| BROADMEADOW | Nineways Broadmeadow Coles Express SS | Corner Brunker Road and Lambton ROAD | Service Station | Regulation under CLM Act not required | -32.92511185 | 151.7364247 |
| BROADMEADOW | 2 Georgetown Road, Broadmeadow NSW 2292 | 2 Georgetown ROAD | Metal Industry | Regulation being finalised | -32.91229404 | 151.7322202 |
| BROKE | Broke Village General Store | 4 Wollombi STREET | Service Station | Under assessment | -32.75043176 | 151.1035721 |
| BROKEN HEAD | South Byron Sewage Treatment Works | Broken Head ROAD | Other Industry | Regulation under CLM Act not required | -28.67233626 | 153.6148974 |
| BROKEN HILL | Former Caltex Depot | 3 Kanandah ROAD | Service Station | Regulation under CLM Act not required | -31.98341823 | 141.4332211 |
| BROKEN HILL | Former Caltex Service Station | 167-173 Argent STREET | Service Station | Regulation under CLM Act not required | -31.96066663 | 141.4624175 |
| BROKEN HILL | Caltex Service Station | 73-87 Oxide STREET | Service Station | Contamination formerly regulated under the CLM Act | -31.95519591 | 141.4658647 |
| BROKEN HILL | Former Gasworks | Cornish STREET | Gasworks | Contamination formerly regulated under the CLM Act | -31.96330562 | 141.4470611 |
| BROKEN HILL | Caltex Service Station | 535 Argent STREET | Service Station | Regulation under CLM Act not required | -31.95311924 | 141.4745274 |
| BROKEN HILL | Tasco Petroleum (Former Mobil) Depot | 5 Kanandah ROAD | Other Petroleum | Regulation under CLM Act not required | -31.9843986 | 141.4329127 |
| BROKEN HILL | Former Mobil Aviation Refuelling Facility, Broken Hill Airport | Airport ROAD | Other Petroleum | Regulation under CLM Act not required | -31.99928312 | 141.4685759 |
| BROKEN HILL | Former Mobil Depot | Corner Of Talc Street and Gossan STREET | Other Petroleum | Regulation under CLM Act not required | -31.96018102 | 141.4514752 |
| BROKEN HILL | Broken Hill Kanandah Road Refuelling Depot | Kanandah ROAD | Other Petroleum | Regulation under CLM Act not required | -31.98543706 | 141.4196 |
| BROKEN HILL | Broken Hill Gas Turbines | 76A Pinnacles ROAD | Unclassified | Regulation under CLM Act not required | -33.43673058 | 148.358727 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BROKEN HILL | Broken Hill Railway Yard | Crystal STREET | Landfill | Under assessment | -31.9690434 | 141.4563004 |
| BROOKLYN | Former Oyster Farm | 139 Brooklyn (Off Government) ROAD | Unclassified | Regulation under CLM Act not required | -33.54716867 | 151.2229744 |
| BROOKVALE | Coles Express Service Station Brookvale | 198 Harbord ROAD | Service Station | Regulation under CLM Act not required | -33.76332299 | 151.2794028 |
| BROOKVALE | Woolworths Petrol Brookvale | 756 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.76170587 | 151.2762411 |
| BROOKVALE | Caltex Service Station Brookvale | 740-742 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.76146721 | 151.2745358 |
| BROOKVALE | Harrison Manufacturing | 75 Old Pittwater ROAD | Other Industry | Regulation under CLM Act not required | -33.76497282 | 151.2637961 |
| BROOKVALE | Brookvale Bus Depot | 630-636 Pittwater ROAD | Other Petroleum | Regulation under CLM Act not required | -33.76641698 | 151.2705659 |
| BROOKVALE | Warringah Mall | Cnr Condamine Street, Old Pittwater Rd & Cross STREET | Other Industry | Regulation under CLM Act not required | -33.76729923 | 151.2657272 |
| BROOKVALE | Littles Dry Cleaning | 123 Old Pittwater ROAD | Other Industry | Regulation under CLM Act not required | -33.76759121 | 151.2625932 |
| BROOKVALE | 101 – 105 Old Pittwater Road, Brookvale | 101 – 105 Old Pittwater ROAD | Landfill | Under assessment | -33.765609 | 151.262588 |
| BROOMS HEAD | Former Brooms Head General Store and Service Station | 92 Ocean ROAD | Service Station | Regulation under CLM Act not required | -29.60711599 | 153.3346312 |
| BROWNSVILLE | Caltex Service Station | 342 Kanahooka ROAD | Service Station | Regulation under CLM Act not required | -34.48591734 | 150.8064373 |
| BRUNSWICK HEADS | Caltex Service Station | 5 Tweed STREET | Service Station | Regulation under CLM Act not required | -28.5381619 | 153.5487135 |
| BUDGEWOI | Colongra Power Station | Off Scenic DRIVE | Other Industry | Regulation under CLM Act not required | -33.21463137 | 151.5529338 |
| BULAHDELAH | Caltex Service Station | 8 Red Gum Road, Corner Mahogany STREET | Service Station | Regulation under CLM Act not required | -32.39837094 | 152.2106015 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| BULAHDELAH | Former Caltex Service Station | 53-59 Bulahdelah WAY | Service Station | Regulation under CLM Act not required | -32.40721638 | 152.2110291 |
| BULAHDELAH | BP-branded (former Mobil) Service Station | 73-75 Bulahdelah WAY | Service Station | Regulation under CLM Act not required | -32.40971018 | 152.2105785 |
| BULLABURRA | Former Burmah Bullaburra Service Station | 367 - 369 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.72482995 | 150.4124537 |
| BULLI | Scrap Yard | 7 Molloy STREET | Other Industry | Contamination formerly regulated under the CLM Act | -34.33663195 | 150.9131154 |
| BULLI | Bulli Brickworks | Quilkey PLACE | Other Industry | Regulation under CLM Act not required | -34.33263113 | 150.9086247 |
| BUNGALORA | Former landfill area | Part of 840 Terranora ROAD | Other Industry | Regulation under CLM Act not required | -28.2424318 | 153.4789209 |
| BUNGENDORE | Former Timber Treatment Plant | Corner King Street and Butmaroo STREET | Other Industry | Contamination formerly regulated under the CLM Act | -35.26151273 | 149.4434907 |
| BUNGENDORE | Bungendore Railway Station and Rail Corridor | Bungendore STREET | Unclassified | Contamination currently regulated under CLM Act | -35.25969164 | 149.4467567 |
| BUNGENDORE | Bungendore former Station Masters Cottage | 16 Majara STREET | Unclassified | Under assessment | -35.254941 | 149.44633 |
| BUNGENDORE | Bungendore to Captains Flats – Rail Corridor | Lot 1 DP 189797 FORMATION | Unclassified | Under assessment | -35.588098 | 149.436721 |
| BURNT YARDS | Junction Reefs Gold Mine (ML 1242 and MPL 273) | Bakers ROAD | Metal Industry | Regulation under CLM Act not required | -33.61252265 | 148.9989385 |
| BURONGA | Caltex Service Station | Sturt Hwy Cnr Silver City HIGHWAY | Service Station | Regulation under CLM Act not required | -34.17056496 | 142.1813847 |
| BURWOOD | Burwood STA Depot | Cnr Shaftesbury and Parramatta ROADS | Other Industry | Contamination formerly regulated under the CLM Act | -33.86982934 | 151.1089057 |
| BYRON BAY | Residential Development | Lot 15 Seaview STREET | Unclassified | Regulation under CLM Act not required | -28.65214464 | 153.6165573 |
| BYRON BAY | Butler Street Reserve Byron Bay | Butler STREET | Landfill | Under assessment | -28.64340617 | 153.6099674 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CABARITA | Dulux (Orica Australia) | Cabarita ROAD | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.84643972 | 151.1157115 |
| CABARITA | Wellcome Soil Containment Cells Cabarita | 47 and 48 Phillips STREET | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.85250251 | 151.1176366 |
| CABRAMATTA | Caltex Service Station Cabramatta | 168 John STREET | Service Station | Regulation under CLM Act not required | -33.89422314 | 150.9279279 |
| CABRAMATTA | Caltex (former Mobil) Lansvale Service Station | 141 Hume HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.89442261 | 150.9571507 |
| CABRAMATTA | Cabramatta Creek | 17 A and 19A Liverpool Street STREET | Unclassified | Regulation under CLM Act not required | -33.90284952 | 150.9415616 |
| CABRAMATTA WEST | BP Cabramatta (Lansvale) | 115-119 Hume HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.89373753 | 150.9587201 |
| CABRAMURRA | Selwyn Snowfields /Selwyn Snow Resort | 213A Kings Cross ROAD | Other Industry | Regulation under CLM Act not required | -35.90869221 | 148.4565678 |
| CALGA | Former service station | 101 Peats Ridge ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.37592138 | 151.2254951 |
| CALLALA BEACH | Callala Beach General Store | (formerly 1 Quay Rd) 114A Quay ROAD | Service Station | Regulation under CLM Act not required | -35.0101817 | 150.6964322 |
| CAMBRIDGE GARDENS | Caltex Cambridge Park | 1 Boomerang PLACE | Service Station | Regulation under CLM Act not required | -33.74068794 | 150.717174 |
| CAMDEN | Camden High School (former) | John STREET | Gasworks | Regulation under CLM Act not required | -34.05114079 | 150.6951285 |
| CAMDEN | Caltex Camden Service Station | 21 Barsden STREET | Service Station | Regulation under CLM Act not required | -34.05808413 | 150.6914744 |
| CAMDEN SOUTH | Coles Express Service Station Camden South | 273 Old Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.08660995 | 150.6945444 |
| CAMELLIA | Hymix Concrete | 14 Grand AVENUE | Metal Industry | Contamination currently regulated under CLM Act | -33.82243454 | 151.044789 |
| CAMELLIA | Mauri Foods | 15 Grand AVENUE | Other Industry | Regulation being finalised | -33.81996985 | 151.0335725 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CAMELLIA | James Hardie Factory (former, eastern portion) | 1 Grand AVENUE | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.81822448 | 151.0260958 |
| CAMELLIA | Bitumen Manufacturer | 12 Grand AVENUE | Other Industry | Contamination currently regulated under CLM Act | -33.82189695 | 151.0429251 |
| CAMELLIA | Hambear | 14 Thackeray STREET | Metal Industry | Regulation under CLM Act not required | -33.81920482 | 151.0419394 |
| CAMELLIA | Former Asciano Properties | 37A and 39 Grand AVENUE | Chemical Industry | Contamination currently regulated under CLM Act | -33.82056014 | 151.0443331 |
| CAMELLIA | Railway Land | 27 Grand AVENUE | Other Industry | Regulation under CLM Act not required | -33.81910822 | 151.0382483 |
| CAMELLIA | Wrigg | 13 Grand AVENUE | Metal Industry | Under preliminary investigation order | -33.81971361 | 151.0321525 |
| CAMELLIA | Sydney Water | 41 Grand AVENUE | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.8217493 | 151.0453367 |
| CAMELLIA | Former Shell Clyde Refinery | Durham STREET | Other Petroleum | Contamination currently regulated under CLM Act | -33.82804924 | 151.0378966 |
| CAMELLIA | Council Reserve | 11B Grand AVENUE | Metal Industry | Regulation under CLM Act not required | -33.81850502 | 151.0302425 |
| CAMELLIA | Veolia | 37 Grand AVENUE | Chemical Industry | Contamination currently regulated under CLM Act | -33.81980027 | 151.0430689 |
| CAMELLIA | Maritime Services Board | 33A Grand AVENUE | Metal Industry | Regulation under CLM Act not required | -33.81836086 | 151.0401249 |
| CAMMERAY | Tunks Park | Brothers AVENUE | Landfill | Contamination formerly regulated under the CLM Act | -33.81734704 | 151.2113338 |
| CAMMERAY | Coles Express Cammeray | 477-483 Miller STREET | Service Station | Regulation under CLM Act not required | -33.82141124 | 151.2108658 |
| CAMPBELLTOWN | Mobil Service Station | 96-98 Queen STREET | Service Station | Regulation under CLM Act not required | -34.06407588 | 150.8170082 |
| CAMPBELLTOWN | BP Macarthur Service Station | Cnr Blaxland ROAD and Campbelltown ROAD | Service Station | Regulation under CLM Act not required | -34.05312872 | 150.8234349 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CAMPBELLTOWN | Former vehicle wrecking yard | 38 Blaxland ROAD | Other Industry | Regulation under CLM Act not required | -34.06055735 | 150.8130598 |
| CAMPERDOWN | Former Gee Graphics | 27 Church STREET | Other Industry | Regulation under CLM Act not required | -33.88737747 | 151.1773616 |
| CAMPERDOWN | O'Dea Reserve | Salisbury LANE | Landfill | Contamination formerly regulated under the CLM Act | -33.89072786 | 151.1736948 |
| CAMPERDOWN | The Spruce | 12-14 Marsden STREET | Other Industry | Regulation under CLM Act not required | -33.88720632 | 151.1784514 |
| CAMPSIE | Former Sunbeam factory | 60 Charlotte STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.92254225 | 151.1025796 |
| CAMPSIE | Budget Petroleum and adjacent property | 403 Canterbury Road and 1 Una STREET | Service Station | Contamination currently regulated under CLM Act | -33.91605617 | 151.1086596 |
| CANLEY HEIGHTS | Former Caltex Canley Heights | 368 Canley Vale ROAD | Service Station | Regulation under CLM Act not required | -33.88271081 | 150.9154176 |
| CANLEY HEIGHTS | Caltex Canley Heights Service Station | 280-286 Canley Vale ROAD | Service Station | Regulation under CLM Act not required | -33.88393501 | 150.9241656 |
| CANLEY VALE | Coles Express Lansvale | 99 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.89295753 | 150.9606136 |
| CANLEY VALE | Former Mobil Service Station | 96 Canley Vale ROAD | Service Station | Regulation under CLM Act not required | -33.88591573 | 150.9369801 |
| CANOWINDRA | BP-branded Jasbe Service Station | 76 Rodd STREET | Service Station | Regulation under CLM Act not required | -33.56131773 | 148.6682805 |
| CANTERBURY | Metro Petroleum Service Station | 13-19 Canterbury ROAD | Service Station | Contamination currently regulated under CLM Act | -33.90783455 | 151.125207 |
| CAPTAINS FLAT | Rail corridor adjacent to Lake George Mine | 1 Copper Creek Road ROAD | Other Industry | Contamination currently regulated under CLM Act | -35.59038471 | 149.4382246 |
| CAPTAINS FLAT | Captains Flat former Station Masters Cottage | 2 Copper Creek ROAD | Other Industry | Contamination currently regulated under CLM Act | -35.59027127 | 149.4384122 |
| CAPTAINS FLAT | Captains Flat Rail Corridor | Copper Creek ROAD | Other Industry | Contamination currently regulated under CLM Act | -35.590513 | 149.438729 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CAPTAINS FLAT | Vacant Land - 58 Foxlow Street, Captains Flat NSW 2623 | 58 Foxlow STREET | Landfill | Under assessment | -35.592825 | 149.445142 |
| CARDIFF | 7-Eleven Service Station | 399 Main ROAD | Service Station | Regulation under CLM Act not required | -32.93391137 | 151.6562111 |
| CARDIFF | Former Caltex Service Station | 367 Main ROAD | Service Station | Regulation under CLM Act not required | -32.93761223 | 151.6577781 |
| CARDIFF | Maneela Oval | Main ROAD | Other Industry | Regulation under CLM Act not required | -32.93018443 | 151.6435559 |
| CARDIFF | Former Mobil Depot | 7 Ranton STREET | Other Petroleum | Regulation under CLM Act not required | -32.94516764 | 151.6470387 |
| CARDIFF | BP Service Station (Reliance Petroleum) | Corner Sturt and Main ROADS | Service Station | Regulation under CLM Act not required | -32.93792229 | 151.6569905 |
| CARDIFF | Woolworths (former Mobil) Cardiff Service Station | 43 Macquarie ROAD | Service Station | Regulation under CLM Act not required | -32.94118246 | 151.6578195 |
| CARINGBAH | Former Consumer Health Products Manufacturer | 32-40 Cawarra ROAD | Other Industry | Regulation under CLM Act not required | -34.03024369 | 151.1277755 |
| CARINGBAH | Caltex Lilli Pilli Service Station | 477-481 Port Hacking ROAD | Service Station | Regulation under CLM Act not required | -34.05243807 | 151.1216353 |
| CARINGBAH | 7-Eleven Service Station | 367 The KINGSWAY | Service Station | Regulation under CLM Act not required | -34.03948677 | 151.1203268 |
| CARINGBAH | Adjacent to Spirent Australia | 101-103 Cawarra ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -34.03360747 | 151.1245577 |
| CARINGBAH | Spirent Australia | 105 Cawarra ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -34.03425343 | 151.1245092 |
| CARINGBAH | BP Service Station Caringbah | 54 Captain Cook DRIVE | Service Station | Regulation under CLM Act not required | -34.032986 | 151.1250656 |
| CARINGBAH | 113 Willarong Road Caringbah NSW | 113 Willarong Road Caringbah ROAD | Landfill | Regulation under CLM Act not required | -34.0368217 | 151.1199978 |
| CARLINGFORD | Caltex Service Station Carlingford | 131 Pennant Hills ROAD | Service Station | Regulation under CLM Act not required | -33.78762398 | 151.0279422 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CARLINGFORD | Caltex Service Station | 797 Pennant Hills ROAD | Service Station | Regulation under CLM Act not required | -33.7757819 | 151.0516532 |
| CARLTON | Shell Coles Express Service Station | 277 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.9748579 | 151.1272732 |
| CARRINGTON | Commercial Metals Company (CMC) Australia Pty Ltd | 117-121 Bourke STREET | Other Industry | Regulation under CLM Act not required | -32.9148832 | 151.7677193 |
| CARRINGTON | Carrington redevelopment site | 11 Howden STREET | Other Industry | Regulation under CLM Act not required | -32.91309509 | 151.7625341 |
| CARRINGTON | Forgacs Dockyard | 81 Denison STREET | Other Industry | Regulation under CLM Act not required | -32.9207441 | 151.764816 |
| CARRINGTON | NAT vacant land | Bourke STREET | Unclassified | Regulation under CLM Act not required | -32.91276029 | 151.7685894 |
| CARRINGTON | Dyke Point Containment Cell | Dyke ROAD | Other Industry | Regulation under CLM Act not required | -32.91763422 | 151.7727101 |
| CARRINGTON | Carrington Coal Tar Pavements | Bourke Street to Dyke ROAD | Other Industry | Regulation under CLM Act not required | -32.91441348 | 151.770271 |
| CARRINGTON | Pasminco Ship Loader | Dyke Berth 2 (off Bourke Street) OTHER | Metal Industry | Regulation under CLM Act not required | -32.9148698 | 151.7716837 |
| CARSS PARK | Vacant Property | 334 Princes HIGHWAY | Other Industry | Regulation under CLM Act not required | -33.98628486 | 151.1133908 |
| CARSS PARK | Kogarah War Memorial Pool | 78 Carwar AVENUE | Other Industry | Regulation under CLM Act not required | -33.9889195 | 151.1178227 |
| CARWELL | Cement Australia Carwell Creek Quarries | Quarry ROAD | Other Industry | Regulation under CLM Act not required | -32.85570277 | 149.9170908 |
| CASINO | Ampol Casino Fuel Depot (Site ID: 11703) - formerly Caltex Service Station and Depot Casino | 32 Dyraaba STREET | Service Station | Under assessment | -28.85488567 | 153.044806 |
| CASINO | Casino Roadhouse | 86 Johnston STREET | Service Station | Contamination formerly regulated under the CLM Act | -28.85960698 | 153.0562429 |
| CASINO | Caltex Service Station | 96 Centre STREET | Service Station | Regulation under CLM Act not required | -28.86539567 | 153.0450654 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CASINO | Former Gasworks | 134-136 North STREET | Gasworks | Regulation under CLM Act not required | -28.86080712 | 153.0526043 |
| CASINO | Woolworths Service Station Casino | 130 Canterbury STREET | Service Station | Regulation under CLM Act not required | -28.86231341 | 153.0464642 |
| CASINO | 18 Beith Street, Casino | 18 Beith STREET | Unclassified | Regulation under CLM Act not required | -28.84951426 | 153.0446585 |
| CASINO | Corner Store | 30 Barker STREET | Service Station | Regulation under CLM Act not required | -28.86316792 | 153.0389124 |
| CASINO | Casino Roundhouse | 5A Bent STREET | Other Industry | Under assessment | -28.853905 | 153.044083 |
| CASULA | Caltex Casula Service Station | 646 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.95641262 | 150.8934783 |
| CATHERINE HILL BAY | Catherine Hill Bay Coal Handling and Preparation Plant | 1A Keene STREET | Other Industry | Regulation under CLM Act not required | -33.16120556 | 151.6302456 |
| CESSNOCK | Caltex Cessnock Service Station | 103-105 Wollombi (Cnr James Street) ROAD | Service Station | Regulation under CLM Act not required | -32.83936243 | 151.3430078 |
| CESSNOCK | Former Mobil Service Station | 102 Wollombi ROAD | Service Station | Regulation under CLM Act not required | -32.83844074 | 151.3436022 |
| CESSNOCK | Former Service Station | 2-4 Allandale ROAD | Service Station | Regulation under CLM Act not required | -32.83118911 | 151.3560677 |
| CESSNOCK | Lot 340 DP 755215 | Old Maitland ROAD | Gasworks | Regulation under CLM Act not required | -32.822025 | 151.379859 |
| CESSNOCK | Cessnock Former Landfill | Quarry St and Maitland Sts STREET | Landfill | Under assessment | -32.822275 | 151.379365 |
| CHARBON | Charbon Colliery | Clarence ROAD | Other Industry | Regulation under CLM Act not required | -32.92390131 | 149.9839098 |
| CHARLESTOWN | 7-Eleven Charlestown | 273 Charlestown ROAD | Service Station | Regulation under CLM Act not required | -32.95797076 | 151.6896275 |
| CHARLESTOWN | Caltex Woolworths (Former BP) | 91-93 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -32.96631255 | 151.6959086 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CHARLESTOWN | Caltex Service Station | 81 Pacific HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -32.96715274 | 151.6955462 |
| CHARLESTOWN | Ausgrid Powell Street Depot | 8 Powell STREET | Other Industry | Regulation under CLM Act not required | -32.95912375 | 151.6944136 |
| CHARMHAVEN | Caltex Charmhaven Service Station | 13-15 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.21655768 | 151.5091452 |
| CHATSWOOD | Woolworths Chatswood | 364-366 Eastern Valley WAY | Service Station | Regulation under CLM Act not required | -33.78667419 | 151.2010828 |
| CHATSWOOD | Caltex Service Station Chatswood | 572 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.80381271 | 151.1789656 |
| CHATSWOOD | Former Caltex Chatswood Service Station | 607 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.80396472 | 151.1795766 |
| CHATSWOOD | Chatswood Toyota | 728 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.79654247 | 151.1776136 |
| CHATSWOOD | Auto Repairs | 2 Devonshire STREET | Service Station | Regulation under CLM Act not required | -33.8015482 | 151.1859632 |
| CHATSWOOD | Coles Express Service Station Chatswood | 877-879 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.79182176 | 151.1804867 |
| CHERRYBROOK | Caltex Service Station | 67 Shepherds DRIVE | Service Station | Regulation under CLM Act not required | -33.72069183 | 151.0451415 |
| CHESTER HILL | Former Orica, Chester Hill | 127 Orchard ROAD | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.8869823 | 150.9952873 |
| CHESTER HILL | Various industrial premises | 191 Miller ROAD | Chemical Industry | Under assessment | -33.88412112 | 150.9947587 |
| CHESTER HILL | 191 Miller Road & 149 Orchard Road Chester Hill | 191 Miller Road & 149 Orchard ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -33.88412112 | 150.9947587 |
| CHIPPENDALE | Cnr Regent Street & Wellington Street, Chippendale | Wellington STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.88668912 | 151.2015246 |
| CHIPPING NORTON | Former Solchem (Mobil) Depot Chipping Norton | 49-51 Riverside ROAD | Other Petroleum | Regulation under CLM Act not required | -33.91621314 | 150.9696948 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CHIPPING NORTON | Former ACR | 85-107 Alfred STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.92226795 | 150.9586496 |
| CHISWICK | Former Sydney Wiremills (BHP) site | Blackwall Point ROAD | Other Industry | Regulation under CLM Act not required | -33.85131849 | 151.1369131 |
| CHISWICK | 9 -17 Bibby Street, Chiswick | 9 -17 Bibby STREET | Other Industry | Regulation under CLM Act not required | -33.884088 | 150.994779 |
| CHITTAWAY BAY | Former Caltex Chittaway Point | 100 Chittaway ROAD | Service Station | Regulation under CLM Act not required | -33.32707555 | 151.4293546 |
| CHULLORA | Chullora Railway Workshops | Worth STREET | Other Industry | Regulation under CLM Act not required | -33.88639388 | 151.0598201 |
| CLANDULLA | Brogans Creek Quarry | Brogans Creek ROAD | Other Industry | Under assessment | -32.9851278 | 149.9587005 |
| CLARENCE | Clarence Colliery | Chifley ROAD | Other Industry | Regulation under CLM Act not required | -33.46450217 | 150.2522729 |
| CLARENDON | Coles Express Clarendon Service Station | 244 Hawkesbury Valley WAY | Service Station | Regulation under CLM Act not required | -33.6083729 | 150.7890956 |
| CLEARFIELD | Former Pamplings Dip Site | Off Clearfield ROAD | Cattle Dip | Regulation under CLM Act not required | -29.16287185 | 152.882974 |
| CLYBUCCA | BP Service Station | 2171 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -30.93845014 | 152.9422791 |
| CLYDE | 7-Eleven Clyde | 3 Parramatta Road, corner Harbord STREET | Service Station | Regulation under CLM Act not required | -33.83494433 | 151.0222628 |
| CLYDE | 4 Tennyson Street, Clyde NSW 2142 | 4 Tennyson STREET | Other Industry | Regulation under CLM Act not required | -33.83268843 | 151.0267361 |
| CLYDE | Clyde Stabling and Maintenance Facility | Unwin STREET | Other Industry | Contamination being managed via the planning process (EP&A Act) | -33.828974 | 151.025631 |
| COBAR | Former Caltex (Bogas) Service Station Cobar | 56-58 Marshall STREET | Service Station | Regulation under CLM Act not required | -31.49793339 | 145.8346684 |
| COBAR | Mckinnons Gold Mine | Cobar ROAD | Metal Industry | Regulation under CLM Act not required | -31.78179755 | 145.693 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| COBAR | Caltex Service Station Cobar | 99 Marshall (formerly Cnr Barrier Highway and Bathurst Street) STREET | Service Station | Regulation under CLM Act not required | -31.49631924 | 145.8275727 |
| COBAR | Caltex Service Station | Lot 10 Railway PARADE | Service Station | Regulation under CLM Act not required | -31.49350124 | 145.8442372 |
| COFFS HARBOUR | Dan Murphy's Coffs Harbour | 10 Elbow STREET | Service Station | Regulation under CLM Act not required | -30.29439262 | 153.115069 |
| COFFS HARBOUR | BP Service Station | 134-136 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -30.29187037 | 153.1182106 |
| COFFS HARBOUR | Mobil Service Station | 314-316 Harbour DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -30.3056983 | 153.131966 |
| COFFS HARBOUR | Mobil Coffs Harbour Airport | Aviation DRIVE | Other Petroleum | Contamination formerly regulated under the CLM Act | -30.313385 | 153.1175018 |
| COFFS HARBOUR | Aussitel Backpackers Hostel | 312 Harbour DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -30.30585731 | 153.131645 |
| COFFS HARBOUR | Woolworths Petrol | Park Beach Plaza, Arthur STREET | Service Station | Regulation under CLM Act not required | -30.28101154 | 153.132027 |
| COFFS HARBOUR | Caltex Service Station | 157 Orlando STREET | Service Station | Regulation under CLM Act not required | -30.28975334 | 153.1306354 |
| COFFS HARBOUR | Coffs Harbour Slipway | 38 Marina DRIVE | Other Industry | Regulation under CLM Act not required | -30.30325637 | 153.1441437 |
| COFFS HARBOUR | Coffs Harbour Airport Enterprise Park | Aviation DRIVE | Other Industry | Under assessment | -30.32062144 | 153.1181493 |
| COLEAMBALLY | Former Mobil Coleambally Depot | 19 Bencubbin AVENUE | Other Petroleum | Regulation under CLM Act not required | -34.80279552 | 145.8945239 |
| COLLARENEBRI | Former Shell Depot | Corner Narran Street and Queen STREET | Other Petroleum | Regulation under CLM Act not required | -29.54114772 | 148.5789365 |
| COLONGRA | Munmorah Colliery | Scenic DRIVE | Other Industry | Regulation under CLM Act not required | -33.21297737 | 151.5416882 |
| COLONGRA | Endeavour Colliery | Scenic DRIVE | Other Industry | Regulation under CLM Act not required | -33.21297737 | 151.5416882 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| COLYTON | Coles Express (former Ampol) Service Station | 86-88 Great Western HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.77552363 | 150.7953105 |
| CONCORD | Caltex Service Station | 89 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.86785624 | 151.0993769 |
| CONCORD | Former Drycleaners | 41 Majors Bay ROAD | Other Industry | Under assessment | -33.85696523 | 151.1037607 |
| CONCORD WEST | Caltex Service Station - 369 -375 Concord Road, Concord West | 369-375 Concord ROAD | Service Station | Regulation under CLM Act not required | -33.84113835 | 151.0888843 |
| CONDOBOLIN | BP-Branded Service Station | 38 Denison Street, corner Molong STREET | Service Station | Regulation under CLM Act not required | -33.08520378 | 147.1524976 |
| CONDOBOLIN | Former Mobil Depot | 6 Burnett STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -33.08010515 | 147.1642972 |
| CONDOBOLIN | Former Ampol Depot | Cnr Parkes Road and Goobang STREET | Service Station | Regulation under CLM Act not required | -33.08034753 | 147.1642436 |
| CONDOBOLIN | Former Caltex Depot | Parkes ROAD | Service Station | Regulation under CLM Act not required | -33.08255593 | 147.1585922 |
| CONDOBOLIN | Mobil Condobolin Depot Railway Siding | Railway Siding behind 6 Burnett STREET | Other Petroleum | Regulation under CLM Act not required | -33.08058612 | 147.164225 |
| CONSTITUTION HILL | Sydney Water Land | Caloola ROAD | Unclassified | Regulation under CLM Act not required | -33.79781738 | 150.9697436 |
| COOGEE | Caltex Coogee Service Station | 146-148 Coogee Bay Road, corner Mount STREET | Service Station | Regulation under CLM Act not required | -33.91989232 | 151.2517454 |
| COOKS HILL | Former Council Depot Cooks Hill | 152 Bruce Street and 115 Corlette STREET | Other Industry | Regulation under CLM Act not required | -32.93525537 | 151.7641074 |
| COOLAC | Coolac Service Station | Corner Hume Highway and Coleman STREET | Service Station | Regulation under CLM Act not required | -34.95435052 | 148.1595525 |
| COOLAH | BP Depot (Reliance Petroleum) | 72 (formerly 17-23) Cunningham STREET | Other Petroleum | Regulation under CLM Act not required | -31.82275896 | 149.7243171 |
| COOLONGOLOOK | Caltex Service Station | Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -32.21648325 | 152.322813 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| COOMA | Caltex Cooma Service Station | 44 Sharp Street, corner Baron STREET | Service Station | Regulation under CLM Act not required | -36.23323489 | 149.1304134 |
| COOMA | Former Mobil Cooma Depot | 2 Commissioner STREET | Other Petroleum | Regulation under CLM Act not required | -36.23266081 | 149.1346674 |
| COOMA | Former Caltex Cooma Depot | 2 Short STREET | Service Station | Regulation under CLM Act not required | -36.2338672 | 149.1348862 |
| COOMA | Lowes Petroleum Cooma Depot and Service Station (Former BP Reliance Petroleum) | 2-4 Sharp STREET | Other Petroleum | Regulation under CLM Act not required | -36.22819468 | 149.1357696 |
| COOMA | Former Shell Service Station | 48-52 Sharp STREET | Service Station | Contamination formerly regulated under the CLM Act | -36.23350402 | 149.1299514 |
| COOMA | Woolworths Caltex Cooma Service Station | Bombala Street Cnr Massie STREET | Service Station | Regulation under CLM Act not required | -36.23364626 | 149.1267469 |
| COOMA | Former Shell Depot | 48-50 Bradley STREET | Other Petroleum | Regulation under CLM Act not required | -36.23448955 | 149.1347987 |
| COONABARABRAN | Former Mobil Depot | 49 Cowper STREET | Other Petroleum | Regulation under CLM Act not required | -31.27096226 | 149.2818461 |
| COONABARABRAN | Shell Coles Express Service Station | 2-6 John STREET | Service Station | Regulation under CLM Act not required | -31.27706775 | 149.27836 |
| COONABARABRAN | Former Shell Coonabarabran CVRO | Corner Cowper St and Dawson St, formerly 51 Cowper STREET | Other Petroleum | Regulation under CLM Act not required | -31.27003745 | 149.281788 |
| COONABARABRAN | Caltex Service Station | Cnr Dawson & Drummond STREET | Service Station | Regulation under CLM Act not required | -31.26994941 | 149.28183 |
| COONABARABRAN | Caltex Service Station | 85-87 John STREET | Service Station | Regulation under CLM Act not required | -31.27231215 | 149.2771297 |
| COONAMBLE | Former Shell Coonamble Depot | Corner Aberford Street and Quambone ROAD | Other Petroleum | Regulation under CLM Act not required | -30.95349182 | 148.3793432 |
| COONAMBLE | Former Caltex Service StationFormer Ampol Coonamble Fuel Depot | Quambone ROAD | Other Petroleum | Under assessment | -30.95410067 | 148.3792167 |
| COORANBONG | Former Poultry Farm - 91 Alton Road, Cooranbong | 64 - 98 Alton ROAD | Unclassified | Regulation under CLM Act not required | -33.06860138 | 151.4512156 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| COORANBONG | Avondale Auto Centre | 679 Freemans DRIVE | Service Station | Regulation under CLM Act not required | -33.06968809 | 151.4636293 |
| COOTAMUNDRA | Former BP Depot | 1-5 Murray STREET | Other Petroleum | Regulation under CLM Act not required | -34.62915841 | 148.0306962 |
| COOTAMUNDRA | Ampol Cootamundra Fuel Depot(Previously Caltex Service Station) | 26-34 Hovell STREET | Service Station | Under assessment | -34.63624703 | 148.0347479 |
| COOTAMUNDRA | Former Caltex Depot | 219 Sutton STREET | Other Petroleum | Regulation under CLM Act not required | -34.65126548 | 148.0145283 |
| COOTAMUNDRA | Former Ampol Service Station | 72 Parker STREET | Service Station | Regulation under CLM Act not required | -34.63471008 | 148.0296112 |
| COOTAMUNDRA | Former Amoco Depot | 68-72 Hovell STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -34.63871124 | 148.0321134 |
| COOTAMUNDRA | Cootamundra Gasworks | 140-146 Hovell STREET | Gasworks | Contamination currently regulated under CLM Act | -34.64572841 | 148.0255049 |
| COOTAMUNDRA | Former Ampol Cootamundra Rail Siding | Back Brawlin ROAD | Other Petroleum | Regulation under CLM Act not required | -34.65326425 | 148.0143068 |
| CORAMBA | Martin Street | End of Martin Street and adjacent car park OTHER | Service Station | Ongoing maintenance required to manage residual contamination (CLM Act) | -30.22125208 | 153.0156997 |
| CORNWALLIS | 532 Cornwallis Road, Cornwallis | 532 Cornwallis ROAD | Other Industry | Regulation under CLM Act not required | -33.57473895 | 150.7792839 |
| COROWA | Corowa Shire Council Works Depot | 24 Poseidon ROAD | Other Petroleum | Regulation under CLM Act not required | -35.98807923 | 146.3652266 |
| COROWA | Former Ampol Corowa | 10 Bow STREET | Service Station | Regulation under CLM Act not required | -35.99364786 | 146.3901259 |
| COROWA | Cignall Corowa | 280 Hume STREET | Service Station | Under preliminary investigation order | -36.00996015 | 146.3760437 |
| CORRIMAL | Woolworths Petrol - Corrimal | 275 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.37527426 | 150.8962637 |
| CORRIMAL | 7-Eleven Corrimal | 138-146 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.36986818 | 150.8978241 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| COWRA | Shell Depot | 34 Brougham STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -33.83913341 | 148.6973491 |
| COWRA | Landmark Fertiliser Storage Facility | Corner Young Road & Waratah STREET | Chemical Industry | Regulation under CLM Act not required | -33.84321832 | 148.6722578 |
| COWRA | Lowes Petroleum (former BP Cowra Depot) | 12 Campbell STREET | Other Petroleum | Regulation under CLM Act not required | -33.83803706 | 148.6977873 |
| COWRA | Former Gasworks | 30 Brougham STREET | Gasworks | Contamination currently regulated under CLM Act | -33.8389659 | 148.6963482 |
| COWRA | Former Railway Gatekeeper Residence Cowra | 32 Brougham STREET | Gasworks | Regulation under CLM Act not required | -33.8389659 | 148.6963482 |
| CRANGAN BAY | Former Service Station | 555 and 565 Pacific HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.17306517 | 151.6084446 |
| CREMORNE | Shell Coles Express Service Station | 225 Military ROAD | Service Station | Regulation under CLM Act not required | -33.83063306 | 151.226223 |
| CRESTWOOD | Former Caltex Depot Queanbeyan | 36 Kendall (Cnr Stephens Rd) AVENUE | Other Petroleum | Regulation under CLM Act not required | -35.34615546 | 149.207807 |
| CRESTWOOD | Former BP Queanbeyan | 64 Uriarra ROAD | Service Station | Regulation under CLM Act not required | -35.34646177 | 149.2246263 |
| CROMER | Former Roche Products Dee Why Facility | 100 South Creek ROAD | Other Industry | Contamination currently regulated under CLM Act | -33.73893118 | 151.2870389 |
| CRONULLA | Breen Holdings | Bate Bay ROAD | Other Industry | Regulation under CLM Act not required | -34.03861737 | 151.1614114 |
| CROWS NEST | Caltex Service Station | 111-121 Falcon STREET | Service Station | Regulation under CLM Act not required | -33.82868236 | 151.2060317 |
| CROYDON | Caltex Service Station | 404-410 Liverpool ROAD | Service Station | Regulation under CLM Act not required | -33.88853994 | 151.115879 |
| CROYDON | BP Ashfield | 584 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.87399409 | 151.1267296 |
| CROYDON PARK | Mobil Service Station | 334 Georges River ROAD | Service Station | Regulation under CLM Act not required | -33.89771626 | 151.0999194 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| CULBURRA BEACH | Former Shoalhaven City Council Garbage Depot | 453 Culburra ROAD | Landfill | Regulation under CLM Act not required | -34.938141 | 150.749764 |
| CULCAIRN | Caltex Service Station | 2883 Olympic HIGHWAY | Service Station | Regulation under CLM Act not required | -35.67441635 | 147.0356845 |
| CULLEN BULLEN | Baal Bone Colliery | Castlereagh HIGHWAY | Other Industry | Regulation under CLM Act not required | -33.27193875 | 150.0587194 |
| CUNDLETOWN | Caltex Service Station (1 Manning River Drive) | Old Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -31.89329598 | 152.5068225 |
| CURL CURL | John Fisher Park | Corner Harbord and Abbott ROADS | Landfill | Regulation under CLM Act not required | -33.76622613 | 151.2860705 |
| DACEYVILLE | Astrolabe Park | Cook AVENUE | Landfill | Regulation under CLM Act not required | -33.92963704 | 151.221773 |
| DAPTO | 7-Eleven Dapto | 125 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.4983106 | 150.7912911 |
| DAPTO | RailCorp Dapto | (Rear of property) 12-14 Hamilton STREET | Other Industry | Regulation under CLM Act not required | -34.50045405 | 150.787353 |
| DAPTO | Nicheinvest Pty Ltd (Former service station) | 133-139 Lakelands DRIVE | Service Station | Regulation under CLM Act not required | -34.938141 | 150.749764 |
| DARLINGHURST | Proposed Retail Unit | 139-155 Palmer STREET | Unclassified | Regulation under CLM Act not required | -33.87504688 | 151.2168106 |
| DARLINGHURST | Cross City Tunnel | Riley Street and William STREET | Service Station | Contamination was addressed via the planning process (EP&A Act) | -33.87424636 | 151.2158305 |
| DARLINGHURST | 18-28 Neild Avenue, Darlinghurst | 18-28 Neild AVENUE | Landfill | Regulation under CLM Act not required | -33.87876581 | 151.2276546 |
| DARLINGTON | Redfern North Eveleigh Precinct – Paint Shop and Clothing Storesub-precincts | 281 Wilson STREET | Unclassified | Under assessment | -33.893419 | 151.190342 |
| DEE WHY | United Dee Why | 148 Pacific Parade STREET | Service Station | Contamination currently regulated under CLM Act | -33.75569536 | 151.295963 |
| DEE WHY | United Dee Why Pittwater | 625 Pittwater Road, Cnr Mooramba ROAD | Service Station | Regulation under CLM Act not required | -33.7559565 | 151.2826053 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| DEE WHY | Caltex Service Station | 793-797 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.74566596 | 151.2920719 |
| DEE WHY | Dee Why Town Centre | Pittwater ROAD | Other Industry | Regulation under CLM Act not required | -33.753169 | 151.2875805 |
| DENHAM COURT | Denham Court Caravan Park and Service Station | 505 Campbelltown ROAD | Service Station | Contamination currently regulated under CLM Act | -33.98208395 | 150.8459471 |
| DENILIQUIN | Former Deniliquin Gasworks | 365, 369 and 329-331 George and 380 and 386 Charlotte STREET | Gasworks | Under assessment | -35.52686777 | 144.9636739 |
| DENILIQUIN | Landmark Fertiliser Storage Facility | 99-101 Davidson STREET | Chemical Industry | Regulation under CLM Act not required | -35.52534735 | 144.975142 |
| DENILIQUIN | Shell Coles Express Service Station | 336 Victoria STREET | Service Station | Contamination formerly regulated under the CLM Act | -35.52373613 | 144.9807345 |
| DENILIQUIN | Former Deniliquin Caltex Depot | 116-118 Hardinge (Cnr Wood St) STREET | Service Station | Regulation under CLM Act not required | -35.53196985 | 144.9544597 |
| DENILIQUIN | BP Depot (Reliance Petroleum) | 125 - 127 Hardinge STREET | Service Station | Regulation under CLM Act not required | -35.53222124 | 144.9517397 |
| DENILIQUIN | Former Shell Depot | 143-147 Napier STREET | Other Petroleum | Regulation under CLM Act not required | -35.5342355 | 144.953169 |
| DENILIQUIN | Previous Council depot site | 392 - 394 Hay ROAD | Unclassified | Regulation under CLM Act not required | -35.51888562 | 144.977968 |
| DENMAN | Former Industrial Site | 10 Fontana WAY | Metal Industry | Regulation under CLM Act not required | -32.37945456 | 150.6868239 |
| DENMAN | Former Industrial Site | 9 Fontana WAY | Metal Industry | Regulation under CLM Act not required | -32.37911159 | 150.6869866 |
| DORA CREEK | Former Service Station | 4 Doree PLACE | Service Station | Regulation under CLM Act not required | -33.08452746 | 151.502415 |
| DOUBLE BAY | 64 Suttie Road, Double Bay NSW 2028 | 64 Suttie ROAD | Other Industry | Regulation under CLM Act not required | -33.88449649 | 151.2472734 |
| DOYALSON | Part Lot 3 DP 259306 | Off David STREET | Other Industry | Regulation under CLM Act not required | -33.20436131 | 151.5232558 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| DOYALSON | Munmorah Power Station | (Central Coast Highway) Scenic DRIVE | Other Industry | Contamination currently regulated under CLM Act | -33.20678347 | 151.540795 |
| DOYALSON | Mannering Colliery (formerly Wyee) | Rutleys ROAD | Other Industry | Regulation under CLM Act not required | -33.17179576 | 151.5419248 |
| DOYALSON NORTH | Caltex Service Station | 235 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.18501024 | 151.5526114 |
| DOYALSON NORTH | Shell Coles Express Service Station | 260-270 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.18636608 | 151.5482399 |
| DRUMMOYNE | Coles Express Service Station Drummoyne (Eastbound) | 36-46 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.85576628 | 151.1593519 |
| DRUMMOYNE | Former Dry Cleaners | 225 Victoria ROAD | Chemical Industry | Regulation under CLM Act not required | -33.8507152 | 151.1537113 |
| DRUMMOYNE | Coles Express Service Station Drummoyne South (Westbound) | 39-45 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.85606575 | 151.1589061 |
| DRUMMOYNE | Caltex Service Station | 191-195 Lyons ROAD | Service Station | Regulation under CLM Act not required | -33.85699216 | 151.1460356 |
| DUBBO | BP Reliance Petroleum Service Station (Former Mobil Depot) | 107 Erskine STREET | Other Petroleum | Regulation under CLM Act not required | -32.24441287 | 148.6111704 |
| DUBBO | Dubbo Police Station | 143 Brisbane STREET | Other Petroleum | Regulation under CLM Act not required | -32.24652288 | 148.6034702 |
| DUBBO | Shell Coles Express Service Station | 131-133 Cobra STREET | Service Station | Regulation under CLM Act not required | -32.25511317 | 148.6126147 |
| DUBBO | Shell Coles Express Service Station | 45-49 Whylandra STREET | Service Station | Regulation under CLM Act not required | -32.2474598 | 148.5932769 |
| DUBBO | Former Mobil depot | 40-44 Morgan STREET | Other Petroleum | Regulation under CLM Act not required | -32.23912277 | 148.6182711 |
| DUBBO | Caltex Service Station, Dubbo | 60 Windsor PARADE | Service Station | Regulation under CLM Act not required | -32.25459322 | 148.6318 |
| DUBBO | Former Ambulance Station | 165 Brisbane  STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -32.24850755 | 148.6031749 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| DUBBO | BP-Branded Service Station Dubbo West | 51-63 Whylandra STREET | Service Station | Regulation under CLM Act not required | -32.24827657 | 148.5927084 |
| DUBBO | Lowes Petroleum (BP-Branded) Depot, Dubbo | 105 Erskine STREET | Service Station | Regulation under CLM Act not required | -32.24423247 | 148.6101676 |
| DUBBO | Inland Petroleum (Former Shell) Depot | 109 Erskine STREET | Other Petroleum | Regulation under CLM Act not required | -32.24470512 | 148.6124108 |
| DUBBO | Former Caltex Depot | Phillip (corner Fitzroy) STREET | Service Station | Regulation under CLM Act not required | -32.24534863 | 148.6150144 |
| DUBBO | Caltex Service Station | 119 Bourke STREET | Service Station | Regulation under CLM Act not required | -32.24336464 | 148.6091931 |
| DUBBO | United (former Volume Plus) Service Station | 219-223 Cobra STREET | Service Station | Regulation under CLM Act not required | -32.2565155 | 148.6228586 |
| DUBBO | Ampol Service Station, Dubbo | Cnr Brisbane Street and Cobra STREET | Service Station | Contamination currently regulated under CLM Act | -32.25322183 | 148.603164 |
| DUDLEY | Dudley Public School | Cnr Ocean & Boundary STREET | Landfill | Regulation under CLM Act not required | -32.988184 | 151.716027 |
| DULWICH HILL | Former Tyre Recapping | 115-117 Constitution ROAD | Other Industry | Regulation under CLM Act not required | -33.90300876 | 151.1387724 |
| DULWICH HILL | Denison Road Playground | 194 Denison ROAD | Landfill | Regulation under CLM Act not required | -33.90121956 | 151.1404637 |
| DUNEDOO | Former Shell Depot Dunedoo | Cnr Bolaro and Redbank STREET | Other Petroleum | Regulation under CLM Act not required | -32.01565761 | 149.3922418 |
| DUNGOG | Lot 54 Common Rd | 54 Common ROAD | Unclassified | Regulation under CLM Act not required | -32.39490989 | 151.739821 |
| DUNGOG | Former HWC Maintenance Depot for Civil Engineering Works | 86 Abelard STREET | Other Industry | Regulation under CLM Act not required | -32.40429396 | 151.7514073 |
| DUNMORE | Equestrian Centre | 71 Fig Hill LANE | Unclassified | Regulation under CLM Act not required | -34.62313393 | 150.8421544 |
| DURAL | Caltex Dural Service Station | 917-923 Old Northern ROAD | Service Station | Regulation under CLM Act not required | -33.68312075 | 151.0287519 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| DURAL | BP Dural Service Station | 580 Old Northern ROAD | Service Station | Regulation under CLM Act not required | -33.69569985 | 151.0283357 |
| DURAL | Caltex Service Station | 530 Old Northern ROAD | Service Station | Regulation under CLM Act not required | -33.69348472 | 151.0202716 |
| DURAL | Woolworths Service Station | 532 Old Northern ROAD | Service Station | Regulation under CLM Act not required | -33.69348472 | 151.0202716 |
| DURAL | 21 John Radley Avenue, Dural | 21 John Radley AVENUE | Landfill | Contamination currently regulated under CLM Act | -33.71718718 | 151.0331317 |
| DURAL | Dural Quarry | 54 Quarry ROAD | Landfill | Under assessment | -33.700731 | 151.053722 |
| DURI | Duri Store | 13 Railway AVENUE | Service Station | Contamination currently regulated under CLM Act | -31.21710021 | 150.8183675 |
| EAGLE VALE | BP Service Station | Corner Eagle Vale Drive and Gould ROAD | Service Station | Regulation under CLM Act not required | -34.03128043 | 150.816363 |
| EARLWOOD | RTA Land | 3 Jackson PLACE | Unclassified | Regulation under CLM Act not required | -33.92724512 | 151.1433382 |
| EARLWOOD | Wolli Creek Aqueduct | Unwin STREET | Unclassified | Regulation under CLM Act not required | -33.92788788 | 151.1480807 |
| EARLWOOD | 2, 4 & 6 Unwin Street Earlwood | 2, 4 & 6 Unwin STREET | Landfill | Regulation under CLM Act not required | -33.92683761 | 151.149505 |
| EAST BALLINA | Caltex East Ballina Service Station | 34 Links AVENUE | Service Station | Regulation under CLM Act not required | -28.85009113 | 153.5829246 |
| EAST GOSFORD | Presbyterian Aged Care Facility | 8-18 Enid CRESCENT | Landfill | Regulation under CLM Act not required | -33.4376675 | 151.3577947 |
| EAST GOSFORD | Mobil Service Station | 44 Victoria STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.43804781 | 151.353303 |
| EAST GOSFORD | Hylton Moore Park | Althrop STREET | Landfill | Contamination currently regulated under CLM Act | -33.4352203 | 151.3601193 |
| EAST MAITLAND | United Service Station East Maitland | 164 (also known as 250) Newcastle STREET | Service Station | Regulation under CLM Act not required | -32.75245246 | 151.5869136 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| EAST MAITLAND | Woolworths Caltex Green Hills | 14 Mitchell DRIVE | Service Station | Regulation under CLM Act not required | -32.76182386 | 151.5927863 |
| EAST MAITLAND | Former Gasworks Site | Corner Melbourne Street and Brisbane STREET | Gasworks | Regulation under CLM Act not required | -32.74939199 | 151.5788783 |
| EAST MAITLAND | Caltex East Maitland Service Station | Newcastle Road, Corner William STREET | Service Station | Regulation under CLM Act not required | -32.74883712 | 151.5829296 |
| EAST TAMWORTH | Caltex Service Station | 350-362 Armidale ROAD | Service Station | Regulation under CLM Act not required | -31.11401974 | 150.9613327 |
| EASTERN CREEK | Caltex Service Station | M4 (Eastbound) MOTORWAY | Service Station | Regulation under CLM Act not required | -33.801607 | 150.8857989 |
| EASTERN CREEK | Caltex Service Station M4 Motorway Westbound | M4 (Westbound) MOTORWAY | Service Station | Regulation under CLM Act not required | -33.80255701 | 150.8829211 |
| EASTERN CREEK | Fulton Hogan Industries (formerly Pioneer Road Services) | Honeycomb DRIVE | Other Industry | Regulation under CLM Act not required | -33.80231274 | 150.8288299 |
| EASTGARDENS | 130-150 Bunnerong Road Eastgardens | 130 - 150 Bunnerong ROAD | Other Industry | Regulation under CLM Act not required | -33.94230414 | 151.2248138 |
| EASTLAKES | Former Shell Rosebery service station and adjacent land | 275-279 Gardeners ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.92471289 | 151.2100772 |
| EASTLAKES | Eastlakes Reserve | Evans AVENUE | Service Station | Contamination formerly regulated under the CLM Act | -33.92497291 | 151.2102725 |
| EASTLAKES | Budget Petroleum Eastlakes | 102 Maloney STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.93120382 | 151.2054267 |
| EASTLAKES | 73 Gardeners Road | 73 Gardeners ROAD | Unclassified | Regulation under CLM Act not required | -33.92541594 | 151.2182856 |
| EASTWOOD | Former Mobil Service Station Eastwood | 3-5 Trelawney (Cnr Rutledge St) STREET | Service Station | Regulation under CLM Act not required | -33.79273381 | 151.079584 |
| EASTWOOD | 34 Clanwilliam Street, Eastwood | 34 Clanwilliam STREET | Other Industry | Regulation under CLM Act not required | -33.797095 | 151.073838 |
| EDEN | Caltex Service Station | 159 Imlay STREET | Service Station | Regulation under CLM Act not required | -37.06324099 | 149.9044022 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| EDEN | Former Caltex Eden Depot | 80-82 Imlay STREET | Service Station | Contamination currently regulated under CLM Act | -37.0570984 | 149.9038538 |
| EDENSOR PARK | Caltex Bonnyrigg Service Station, Edensor Park | 549 Elizabeth DRIVE | Service Station | Regulation under CLM Act not required | -33.88840816 | 150.8822609 |
| EDENSOR PARK | 7-Eleven (former Mobil) Service Station | 615-621 Cowpasture Road, corner Elizabeth DRIVE | Service Station | Regulation under CLM Act not required | -33.88326139 | 150.865591 |
| EDGECLIFF | BP-branded (former Coles Express) Service Station | 73-85A New South Head ROAD | Service Station | Regulation under CLM Act not required | -33.8769602 | 151.2311617 |
| EDGEWORTH | Caltex Service Station | 662 Main ROAD | Service Station | Regulation under CLM Act not required | -32.92566329 | 151.6278888 |
| EDGEWORTH | Caltex-Woolworths Branded Service Station Edgeworth | 738-742 Main ROAD | Service Station | Regulation under CLM Act not required | -32.92455492 | 151.6202897 |
| EMERALD BEACH | Shell Coles Express Woolgoolga Service Station | 1850 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -30.16450856 | 153.1826673 |
| EMERTON | 7-Eleven Emerton | 135-137 Popondetta ROAD | Service Station | Regulation under CLM Act not required | -33.74463908 | 150.8102251 |
| EMPIRE BAY | Empire Bay Marina | 16B Sorrento ROAD | Other Industry | Contamination currently regulated under CLM Act | -33.49305196 | 151.3643119 |
| EMPIRE BAY | United Empire Bay Service Station | 306 Empire Bay DRIVE | Service Station | Under assessment | -33.508331 | 151.371829 |
| EMU HEIGHTS | 7-Eleven Service Station | 126 Old Bathurst ROAD | Service Station | Regulation under CLM Act not required | -33.74299098 | 150.6547098 |
| EMU HEIGHTS | Woolworths Service Station | 132 Old Bathurst ROAD | Service Station | Regulation under CLM Act not required | -33.7429739 | 150.6559655 |
| EMU PLAINS | Woolworths Service Station | 283 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.75371349 | 150.6530165 |
| ENFIELD | The Henley Residential Development | 6 Mitchell STREET | Landfill | Under assessment | -33.89344998 | 151.0994528 |
| ENGADINE | Former Caltex Service Station | 995 Old Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.06413459 | 151.0155734 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ENGADINE | BP Service Station | 1234 Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -34.07735416 | 151.01121 |
| ENGADINE | BP Branded Service Station | 963 Old Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -34.06428454 | 151.0167121 |
| ENNGONIA | Clara Hart Village | 17 Fourth AVENUE | Landfill | Under assessment | -29.31449 | 145.85403 |
| EPPING | 7-Eleven (former Mobil) Service Station | 246 Beecroft ROAD | Service Station | Regulation under CLM Act not required | -33.77073552 | 151.080581 |
| ERINA | Coles Express Service Station Erina | 211 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.43547804 | 151.3850522 |
| ERINA | 7-Eleven Erina | 214 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.43494257 | 151.3879511 |
| ERINA | 7-Eleven Service Station | 96 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.43786868 | 151.3729331 |
| ERINA | Jaycar Electronics Store | 1 Aston ROAD | Other Petroleum | Contamination currently regulated under CLM Act | -33.434878 | 151.3845431 |
| ERINA | Caltex Service Station | 155 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.43824871 | 151.3801096 |
| ERMINGTON | Blue Star Ermington | 700 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.80859566 | 151.0660133 |
| ERMINGTON | Caltex Service Station | 562 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.81392814 | 151.0547543 |
| ERSKINE PARK | Western Sydney Service Centre | 25-55 Templar ROAD | Other Industry | Regulation under CLM Act not required | -33.81897822 | 150.7937394 |
| ERSKINEVILLE | Redevelopment Site (Former Industrial Park) Erskineville | 36/1A Coulson STREET | Other Industry | Regulation under CLM Act not required | -33.90325501 | 151.1855668 |
| ERSKINEVILLE | Department of Housing | 52 John STREET | Other Industry | Regulation under CLM Act not required | -33.8982925 | 151.1840284 |
| ERSKINEVILLE | RailCorp land | Coulson STREET | Other Industry | Regulation under CLM Act not required | -33.90483899 | 151.1838804 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ERSKINEVILLE | Lot 4/1A Coulson Street | Coulson STREET | Other Industry | Regulation under CLM Act not required | -33.90316549 | 151.1867963 |
| ERSKINEVILLE | Area B - Public Domain / The Roadway | 1A Coulson STREET | Other Petroleum | Regulation under CLM Act not required | -33.90499999 | 151.1873028 |
| EUABALONG WEST | BP Euabalong West Depot (Reliance Petroleum) | 12 Illewong STREET | Other Petroleum | Regulation under CLM Act not required | -33.05720426 | 146.3946386 |
| EVANS HEAD | Evans Head Aerodrome | Memorial Airport DRIVE | Other Industry | Regulation under CLM Act not required | -29.10389976 | 153.4216791 |
| EVANS HEAD | Bundjalung National Park | The Gap ROAD | Unclassified | Regulation under CLM Act not required | -29.24433977 | 153.3626472 |
| EVANS HEAD | Evans Head Residential subdivision | Bounded by Currajong, Woodburn, Carrabeen Streets and Tuckeroo CRESCENT | Unclassified | Regulation under CLM Act not required | -29.1080969 | 153.4243577 |
| EVELEIGH | Macdonaldtown Triangle | Burren STREET | Gasworks | Contamination being managed via the planning process (EP&A Act) | -33.89803492 | 151.186059 |
| EVELEIGH | Australian Technology Park | Henderson ROAD | Other Industry | Regulation under CLM Act not required | -33.89634136 | 151.1944915 |
| FAIRFIELD | Endeavour Energy Fairfield Zone Substation | 22 Hedges STREET | Other Industry | Regulation under CLM Act not required | -33.86133019 | 150.9555899 |
| FAIRFIELD EAST | Speedway-Branded Service Station Fairfield | 251 The Horsley DRIVE | Service Station | Regulation under CLM Act not required | -33.8711661 | 150.9630077 |
| FAIRFIELD HEIGHTS | 7-Eleven Fairfield Heights | 234 Hamilton (Cnr The Boulevarde) ROAD | Service Station | Regulation under CLM Act not required | -33.87208474 | 150.9373134 |
| FAIRY MEADOW | Woolworths Petrol Service Station | 47 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.39399705 | 150.8925369 |
| FAIRY MEADOW | Caltex Fuel Depot and adjoining land | 46 Montague STREET | Service Station | Contamination formerly regulated under the CLM Act | -34.40050499 | 150.8953125 |
| FAIRY MEADOW | Deynal (Seeman) | 51-59 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.39437085 | 150.8924666 |
| FAIRY MEADOW | Dion's Bus Service | 266 Princes HIGHWAY | Other Petroleum | Under assessment | -34.40551 | 150.891195 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| FALLS CREEK | 805 Falls Road, Falls Creek NSW | 805 Falls ROAD | Unclassified | Regulation under CLM Act not required | -34.994368 | 150.620648 |
| FARLEY | Farley Wastewater Treatment Works | Owlpen LANE | Other Industry | Regulation under CLM Act not required | -32.74431314 | 151.5194217 |
| FASSIFERN | Newstan Colliery | Fassifern ROAD | Other Industry | Regulation under CLM Act not required | -32.97942521 | 151.5660046 |
| FASSIFERN | Former Arsenic Smelter | Fassifern ROAD | Other Industry | Regulation under CLM Act not required | -32.99649819 | 151.5618283 |
| FEDERAL | Federal General Store | 3-6 Federal DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -28.65190728 | 153.4552976 |
| FENNELL BAY | Fennell Bay Public School | 2 Bay ROAD | Unclassified | Under assessment | -32.99152231 | 151.6014923 |
| FERN BAY | Former service station | 37 Fullerton (1006 Nelson Bay Road) STREET | Service Station | Regulation under CLM Act not required | -32.87245004 | 151.7939904 |
| FIVE DOCK | 7-Eleven Five Dock Service Station | 231-235 Great North ROAD | Service Station | Regulation under CLM Act not required | -33.86488376 | 151.130002 |
| FIVE DOCK | Caltex Five Dock Service Station | 47 Ramsay Road, corner Fairlight STREET | Service Station | Regulation under CLM Act not required | -33.87002804 | 151.1301835 |
| FORBES | BP (Former Mobil) Depot Forbes | 3-15 Union STREET | Other Petroleum | Regulation under CLM Act not required | -33.37751977 | 148.0101422 |
| FORBES | Former Gasworks | 24-26 Union STREET | Gasworks | Contamination currently regulated under CLM Act | -33.37752036 | 148.0090064 |
| FORBES | Woolworths (Former Save on Fuel) Service Station | 26 Dowling STREET | Service Station | Regulation under CLM Act not required | -33.38148764 | 148.0109845 |
| FORBES | BP Service Station Forbes | 29 Dowling STREET | Service Station | Regulation under CLM Act not required | -33.38121776 | 148.0100351 |
| FORBES | Former Shell Depot | Stephen STREET | Other Petroleum | Regulation under CLM Act not required | -33.37704755 | 148.0103001 |
| FORBES | Caltex Service Station Forbes | Parkes ROAD | Service Station | Regulation under CLM Act not required | -33.36333714 | 148.0223727 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| FORESTVILLE | BP Service Station, Forestville | 632 Warringah ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.75997969 | 151.2142944 |
| FORESTVILLE | Shell Service Station | 667 Warringah ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.76035336 | 151.2184929 |
| FORRESTERS BEACH | Caltex Service Station | The Entrance Rd Cnr Bellevue ROAD | Service Station | Regulation under CLM Act not required | -33.40057818 | 151.4687631 |
| FORSTER | Caltex Service Station | 16-18 Lake STREET | Service Station | Regulation under CLM Act not required | -32.18306967 | 152.5162492 |
| FORSTER | Shell (Kneebone's) Service Station | 2-6 The Lakes WAY | Service Station | Regulation under CLM Act not required | -32.1946108 | 152.5145662 |
| FORSTER | Enhance (Former Mobil) Service Station | 86-88 Macintosh STREET | Service Station | Regulation under CLM Act not required | -32.19079468 | 152.5154847 |
| FREDERICKTON | Former Service station | 2-4 Great North ROAD | Service Station | Regulation under CLM Act not required | -31.03513998 | 152.8794105 |
| FREEMANS WATERHOLE | United Freemans Waterhole Service Station | 971 Freemans DRIVE | Service Station | Under assessment | -32.9843946 | 151.4856873 |
| FRENCHS FOREST | Former BP Service Station | Russell AVENUE | Service Station | Regulation under CLM Act not required | -33.75018093 | 151.2245005 |
| FRENCHS FOREST | Former 7-Eleven / Mobil Beacon Hill Service Station, Frenchs Forest | 312 Warringah ROAD | Service Station | Regulation under CLM Act not required | -33.75129647 | 151.2469656 |
| FRESHWATER | Prime Service Station Freshwater | 117 Harbord ROAD | Service Station | Regulation under CLM Act not required | -33.77286748 | 151.2794354 |
| FRESHWATER | Former Dry Cleaners | 121 Wyndora AVENUE | Other Industry | Regulation under CLM Act not required | -33.77425321 | 151.2821553 |
| FRESHWATER | Srilax Pty Ltd | 2 Soldiers AVENUE | Service Station | Regulation under CLM Act not required | -33.777383 | 151.286944 |
| GATESHEAD | 7-Eleven Gateshead | 13-15 Pacific HIGHWAY | Service Station | Under assessment | -32.98743366 | 151.6923984 |
| GEORGETOWN | Former Caltex Service Station | 4 Georgetown ROAD | Service Station | Regulation under CLM Act not required | -32.91121105 | 151.7319693 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GERRINGONG | Gerringong Cooperative | 18 Belinda STREET | Other Petroleum | Regulation under CLM Act not required | -34.74518835 | 150.8181054 |
| GILGANDRA | United (Former Mobil) Service Station | 13 Castlereagh STREET | Service Station | Regulation under CLM Act not required | -31.71715641 | 148.6581574 |
| GILGANDRA | Former Mobil Depot | 2 Federation STREET | Other Petroleum | Regulation under CLM Act not required | -31.70937362 | 148.6522102 |
| GILGANDRA | Former Mobil Depot | 20 Federation STREET | Other Petroleum | Regulation under CLM Act not required | -31.70771744 | 148.6514198 |
| GILGANDRA | Caltex Service Station Gilgandra | 6425 Newell HIGHWAY | Service Station | Regulation under CLM Act not required | -31.72545524 | 148.65281 |
| GILLENBAH | Caltex (Former Mobil) Narrandera Service Station | 16321 - 16335 Newell HIGHWAY | Service Station | Regulation under CLM Act not required | -34.76124219 | 146.5398604 |
| GIRRAWEEN | Industrial Galvanizers Girraween | 56-58 Mandoon ROAD | Metal Industry | Contamination currently regulated under CLM Act | -33.80500693 | 150.9396743 |
| GIRRAWEEN | Caltex Pendle Hill Service Station Girraween | 602 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.80827518 | 150.9421511 |
| GLADESVILLE | Caltex Service Station | 287-295 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.8285374 | 151.1268639 |
| GLADESVILLE | Road Reserve | Pittwater ROAD | Other Industry | Regulation under CLM Act not required | -33.81603924 | 151.1355085 |
| GLADESVILLE | Caltex Service Station | 116 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.83575319 | 151.1277863 |
| GLADESVILLE | Glade View Business Park | 436-484 Victoria ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82382382 | 151.1223941 |
| GLADSTONE | Barbers Auto Port | 52-53 Barnard STREET | Service Station | Regulation under CLM Act not required | -31.02313668 | 152.9481617 |
| GLEBE | The Hill and Jubilee Embankment | 12 Maxwell ROAD | Other Industry | Regulation under CLM Act not required | -33.87573032 | 151.1776027 |
| GLEN INNES | Ambulance Station | 106 Bourke STREET | Unclassified | Regulation under CLM Act not required | -29.73805854 | 151.7313138 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GLEN INNES | Telstra Depot Glen Innes | 126 Lambeth STREET | Unclassified | Regulation under CLM Act not required | -29.73565341 | 151.7278271 |
| GLEN INNES | Caltex Glen Innes Service Station | Meade Street, corner Church STREET | Service Station | Regulation under CLM Act not required | -29.73699014 | 151.7379335 |
| GLEN INNES | Former Shell Depot | Lambeth STREET | Other Petroleum | Regulation under CLM Act not required | -29.7376309 | 151.7276309 |
| GLEN INNES | Former Caltex Depot, Glen Innes | Lot 1 DP785636 Lambeth STREET | Other Petroleum | Regulation under CLM Act not required | -29.73525485 | 151.7279167 |
| GLEN INNES | Council-owned Laneway | Lot 2  Lang  STREET | Gasworks | Regulation under CLM Act not required | -29.74385432 | 151.7323049 |
| GLEN INNES | Caltex Service Station | Cnr Taylor Street & Church STREET | Service Station | Regulation under CLM Act not required | -29.73289036 | 151.739653 |
| GLEN INNES | Caltex Glen Innes Paddock | 9979 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -29.75608853 | 151.7344106 |
| GLENBROOK | Caltex Service Station Glenbrook | 78 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.76545234 | 150.6215447 |
| GLENDALE | Coles Express Glendale | 593 Main ROAD | Service Station | Regulation under CLM Act not required | -32.92709242 | 151.637946 |
| GLENDALE | Settlement Pond | 65 Glendale DRIVE | Unclassified | Regulation under CLM Act not required | -32.93411399 | 151.6483695 |
| GLENDALE | Former Service Station | 334-342 Lake ROAD | Unclassified | Regulation under CLM Act not required | -32.92775076 | 151.6433463 |
| GLENDALE | Woolworths Service Station | Stockland DRIVE | Service Station | Regulation under CLM Act not required | -32.93250548 | 151.6404097 |
| GLENDENNING | 7-Eleven Plumpton Service Station Glendenning | 1 Dublin Street, corner Richmond ROAD | Service Station | Regulation under CLM Act not required | -33.73988232 | 150.8603323 |
| GLENORIE | Caltex Glenorie Service Station | 912 Old Northern ROAD | Service Station | Regulation under CLM Act not required | -33.60550946 | 151.0126731 |
| GLENTHORNE | Caltex Taree Service Station | Manning River DRIVE | Service Station | Regulation under CLM Act not required | -31.94415251 | 152.4703511 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GLOUCESTER | Caltex Service Station | 141 Church STREET | Service Station | Regulation under CLM Act not required | -32.01222514 | 151.9579521 |
| GOOLMANGAR | Goolmangar General Store | 851 Nimbin ROAD | Service Station | Regulation under CLM Act not required | -28.74694441 | 153.225401 |
| GOONELLABAH | Former Invercauld Road Cattle Dip | 161 Invercauld ROAD | Cattle Dip | Contamination formerly regulated under the CLM Act | -28.83098216 | 153.3097337 |
| GOSFORD | United (former Mobil) Depot | Corner Merinee Road and Bowen CRESCENT | Other Petroleum | Regulation under CLM Act not required | -33.41523225 | 151.3257069 |
| GOULBURN | Former Goulburn Gasworks | 1 Blackshaw ROAD | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -34.75313166 | 149.725032 |
| GOULBURN | Goulburn Tannery | 13 Gibson STREET | Other Industry | Regulation under CLM Act not required | -34.73756525 | 149.72059 |
| GOULBURN | Former Caltex Depot GoulburnAmpol Goulburn Fuel Depot (Site ID: 28800) | 9/13 Sloane STREET | Other Petroleum | Under assessment | -34.769986 | 149.71063 |
| GOULBURN | Caltex Depot | 13 Sloane STREET | Other Petroleum | Regulation under CLM Act not required | -34.77423152 | 149.7088626 |
| GOULBURN | Metro Goulburn Depot | 23 Braidwood ROAD | Other Petroleum | Regulation under CLM Act not required | -34.76217302 | 149.7170897 |
| GOULBURN | Caltex Service Station | 72-74 Clinton STREET | Service Station | Regulation under CLM Act not required | -34.75728157 | 149.7135824 |
| GOULBURN | Caltex Service Station | 68 Goldsmith STREET | Service Station | Regulation under CLM Act not required | -34.75054432 | 149.7192098 |
| GOULBURN | Mobil Service Station | 129 Lagoon STREET | Service Station | Contamination formerly regulated under the CLM Act | -34.74618793 | 149.7330484 |
| GOULBURN | Former Shell Autoport Service Station | Corner Bruce Street and Lagoon STREET | Service Station | Regulation under CLM Act not required | -34.74807885 | 149.7266246 |
| GOULBURN | Coles Express Service Station | 90 Cowper (Corner Clinton Street) STREET | Service Station | Regulation under CLM Act not required | -34.75566648 | 149.7107831 |
| GOULBURN | Caltex Service Station | 315 Auburn, corner Bradley STREET | Service Station | Regulation under CLM Act not required | -34.74942293 | 149.7232692 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GOULBURN | Former Mobil Service Station Goulburn | 422-426 Auburn STREET | Service Station | Regulation under CLM Act not required | -34.74869879 | 149.7229392 |
| GOULBURN | Goulburn Roundhouse | 12 Braidwood ROAD | Other Industry | Contamination currently regulated under CLM Act | -34.77409903 | 149.7106462 |
| GOULBURN | Goulburn JS Hollingworth & Wheat Siding Yards | Goulburn STREET | Other Industry | Under assessment | -34.7692435 | 149.7116195 |
| GRAFTON | Former General Store and Service Station Grafton | 161 Turf STREET | Service Station | Regulation under CLM Act not required | -29.67412811 | 152.9336609 |
| GRAFTON | Lowes Petroleum (BP-Branded) Depot, Grafton | 13 Orara STREET | Other Petroleum | Regulation under CLM Act not required | -29.67016421 | 152.918161 |
| GRAFTON | Former Shell Depot | 2 Milton STREET | Other Petroleum | Regulation under CLM Act not required | -29.67723019 | 152.9205374 |
| GRAFTON | Grafton Works Depot | 26-28 Bruce STREET | Other Petroleum | Regulation under CLM Act not required | -29.67975507 | 152.9249357 |
| GRAFTON | Former BP Service Station (Reliance Petroleum) | 202 Queen STREET | Service Station | Regulation under CLM Act not required | -29.67645469 | 152.9423977 |
| GRAFTON | Woolworths Petrol | 75 - 77 Fitzroy Street Cnr of Duke STREET | Service Station | Regulation under CLM Act not required | -29.69221713 | 152.9343562 |
| GRAFTON | Caltex Service Station | Corner Villiers St and Fitzroy STREET | Service Station | Regulation under CLM Act not required | -29.69296308 | 152.9366431 |
| GRAFTON | BP Service Station (Reliance Petroleum) | 14 Villiers (Cnr Fitzroy) STREET | Service Station | Regulation under CLM Act not required | -29.69345456 | 152.9373123 |
| GRAFTON | Former Mobil Depot Grafton | 2-16 Bruce STREET | Other Petroleum | Regulation under CLM Act not required | -29.68093591 | 152.9231289 |
| GRAFTON | Caltex Service Station | 179 Prince STREET | Service Station | Regulation under CLM Act not required | -29.68600117 | 152.9371093 |
| GRANVILLE | Caltex Service Station | 144 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.83039605 | 151.0109216 |
| GRANVILLE | Australand | 15-17 Berry STREET | Other Industry | Regulation under CLM Act not required | -33.83600073 | 151.0211988 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GRANVILLE | Woolworths Service Station Granville | 158 Clyde STREET | Service Station | Regulation under CLM Act not required | -33.84623338 | 151.0124885 |
| GRANVILLE | Commercial Property | 2B Factory STREET | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.84173556 | 151.0165687 |
| GRANVILLE | Old Granville Depot | 23 Elizabeth STREET | Unclassified | Regulation under CLM Act not required | -33.83765925 | 151.008528 |
| GRANVILLE | 7-Eleven Service Station | 154-160 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.83022685 | 151.0101322 |
| GRANVILLE | A'Becketts Creek | Albert STREET | Unclassified | Contamination currently regulated under POEO Act | -33.82735776 | 151.0112255 |
| GREEN POINT | 7-Eleven Green Point | 388-390 Avoca DRIVE | Service Station | Regulation under CLM Act not required | -33.46259832 | 151.3639376 |
| GREEN POINT | Green Point closed landfill | Koolang ROAD | Landfill | Under assessment | -33.450207 | 151.383696 |
| GREENACRE | Former Plating Works | 12 Claremont STREET | Unclassified | Regulation under CLM Act not required | -33.89992254 | 151.0386128 |
| GREENACRE | 7-Eleven (former Mobil) Service Station | 301-305 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.90524488 | 151.0419971 |
| GREENACRE | Caltex Service Station | 87 - 91 Roberts ROAD | Service Station | Regulation under CLM Act not required | -33.90461089 | 151.0648581 |
| GREENACRE | Coles Greenacre | 13-19 Boronia ROAD | Other Industry | Regulation under CLM Act not required | -33.9061123 | 151.0561759 |
| GREENACRE | Chullora Distribution Centre | 41 Roberts Road, 2 Mayvic Street, and 27A & 27B Wentworth STREET | Other Industry | Regulation under CLM Act not required | -33.89911054 | 151.0673226 |
| GREENWICH | Gore Creek Reserve - Drainage Line | St Vincents ROAD | Other Industry | Regulation under CLM Act not required | -33.82888693 | 151.1819101 |
| GRENFELL | Former SRA Fuel Depot | Grafton STREET | Other Petroleum | Regulation under CLM Act not required | -33.89351237 | 148.1560188 |
| GRENFELL | Grenfell Gasworks | Corner Gooloogong Road & Bourke STREET | Gasworks | Regulation under CLM Act not required | -33.89006016 | 148.1615443 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GRETA | Coles Express Greta | 122 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -32.67656357 | 151.3872818 |
| GRETA | redevelopment site | 112-114 High STREET | Other Industry | Regulation under CLM Act not required | -32.67706709 | 151.3876682 |
| GRETA | Former landfill | Hollingshed ROAD | Landfill | Regulation under CLM Act not required | -32.66705287 | 151.3923474 |
| GREYSTANES | Metro Branded (former Mobil) Service Station | 73 Ettalong ROAD | Service Station | Regulation under CLM Act not required | -33.81822648 | 150.9513946 |
| GRIFFITH | Liberty Depot (former Shell CVRO) Griffith | 6-10 Mackay AVENUE | Other Petroleum | Regulation under CLM Act not required | -34.2910045 | 146.063824 |
| GRIFFITH | Former Murrumbidgee Irrigation Depot | 55-77 Banna AVENUE | Other Industry | Regulation under CLM Act not required | -34.28858242 | 146.0567509 |
| GRIFFITH | Mobil Depot - Griffith Airport | Off Rememberance DRIVE | Other Petroleum | Regulation under CLM Act not required | -34.25618872 | 146.0620449 |
| GRIFFITH | Former Ampol Depot | 32-34 Mackay AVENUE | Other Petroleum | Regulation under CLM Act not required | -34.2933331 | 146.0679503 |
| GRIFFITH | Caltex Service Station and Depot | 2-4 Mackay AVENUE | Service Station | Regulation under CLM Act not required | -34.2908766 | 146.0630815 |
| GRIFFITH | Former Landmark Fertiliser Storage Facility | 2-8 Jensen ROAD | Chemical Industry | Regulation under CLM Act not required | -34.29365599 | 146.0536413 |
| GRIFFITH | Belford Petroleum (former Mobil) Depot | 30 Banna AVENUE | Service Station | Regulation under CLM Act not required | -34.29042827 | 146.0595497 |
| GRIFFITH | Former BP Service Station (Reliance Petroleum) | 81 Banna AVENUE | Service Station | Regulation under CLM Act not required | -34.28851251 | 146.0540815 |
| GUILDFORD | 7-Eleven Service Station Guildford West | 176 Fowler ROAD | Service Station | Regulation under CLM Act not required | -33.85149493 | 150.9722491 |
| GUILDFORD | 7-Eleven Guildford West | 176 FOWLER STREET | Service Station | Regulation under CLM Act not required | -33.85149493 | 150.9722491 |
| GULGONG | Lowes Petroleum (former BP) Depot Gulgong | 6 Railway STREET | Other Petroleum | Regulation under CLM Act not required | -32.35950625 | 149.5461499 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GULGONG | The Oval Site | Queen STREET | Unclassified | Regulation under CLM Act not required | -32.36169815 | 149.531075 |
| GULGONG | Gulgong Automotive Services | 22 Gulgong STREET | Service Station | Under assessment | -32.357176 | 149.535194 |
| GULMARRAD | BP Service Station Maclean | 3976 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -29.48537407 | 153.2004311 |
| GUMLY GUMLY | Caltex Service Station | 3723 Sturt HIGHWAY | Service Station | Regulation under CLM Act not required | -35.13590309 | 147.4424551 |
| GUMLY GUMLY | Brick Kiln Reserve | Eunony Bridge ROAD | Landfill | Regulation under CLM Act not required | -35.12098411 | 147.4196309 |
| GUNDAGAI | Former Mobil Depot | 98 Mount STREET | Other Petroleum | Regulation under CLM Act not required | -35.08206783 | 148.096221 |
| GUNNEDAH | Ampol Australia Petroleum Pty Ltd (previously Caltex Australia) | 21 Abbott STREET | Service Station | Regulation under CLM Act not required | -30.98021001 | 150.2561856 |
| GUNNEDAH | Former Shell Depot Gunnedah | 85-89 Barber STREET | Other Petroleum | Regulation under CLM Act not required | -30.97949284 | 150.2507401 |
| GUNNEDAH | BP Depot Gunnedah | 103 Mathias ROAD | Other Petroleum | Contamination formerly regulated under the CLM Act | -30.96665001 | 150.2326526 |
| GUNNEDAH | BP Service Station | Corner Conadilly Street & Henry STREET | Service Station | Contamination formerly regulated under the CLM Act | -30.98116266 | 150.2583066 |
| GUNNEDAH | Mobil Service Station | 341 Conadilly STREET | Service Station | Contamination formerly regulated under the CLM Act | -30.9807394 | 150.2578428 |
| GUNNEDAH | Adjacent to Service Station | Intersection of Henry Street and Conadilly STREET | Service Station | Contamination formerly regulated under the CLM Act | -30.98072588 | 150.2582802 |
| GUNNEDAH | Former Caltex Depot | 61 Railway AVENUE | Other Petroleum | Contamination formerly regulated under the CLM Act | -30.97953242 | 150.2494457 |
| GUNNEDAH | Mobil Gunnedah Depot | 16-24 Wentworth STREET | Other Petroleum | Regulation under CLM Act not required | -30.98428725 | 150.260609 |
| GUNNEDAH | Property NSW Site | 35-37 Abbott STREET | Other Petroleum | Regulation under CLM Act not required | -30.9789841 | 150.25737 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| GUNNEDAH | Former Telstra Line Depot | 81 Barber STREET | Other Petroleum | Regulation under CLM Act not required | -30.97933809 | 150.2503121 |
| GUNNING | Gunning Motors | 56 Yass STREET | Service Station | Regulation under CLM Act not required | -34.78159326 | 149.2684791 |
| GURNANG | Oberon Correctional Centre | 110 Gurnang ROAD | Other Petroleum | Under assessment | -32.748217 | 151.580843 |
| GUYRA | Guyra Fourways Service Centre | 87-89 Bradley STREET | Service Station | Regulation under CLM Act not required | -30.21728173 | 151.6722825 |
| GUYRA | Caltex-branded Service Station | 4352 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -30.20601937 | 151.6757291 |
| GUYRA | StateRail land leased to Incitec | Starr ROAD | Other Industry | Regulation under CLM Act not required | -30.23157011 | 151.6707135 |
| GUYRA | Black Mountain - Former Cartan Residence | off Black Mountain Road ROAD | Other Industry | Under assessment | -30.305208 | 151.655985 |
| GWANDALAN | Metro Petroleum Gwandalan (Formerly Gwandalan Auto Care) | 47 Orana ROAD | Service Station | Regulation under CLM Act not required | -33.13632941 | 151.5813396 |
| GWANDALAN | Former Gwandalan Landfill | Kanangra DRIVE | Landfill | Regulation under CLM Act not required | -33.17497722 | 151.5917107 |
| GYMEA | 7-Eleven (former Mobil) Gymea Service Station | 110 Gymea Bay ROAD | Service Station | Regulation under CLM Act not required | -34.03745848 | 151.0848547 |
| GYMEA | Coles Express Kirrawee | 470 Princes (Cnr The Boulevarde) HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -34.02735302 | 151.0845079 |
| GYMEA | Former Shell Service Station Gymea | Gymea Bay ROAD | Service Station | Regulation under CLM Act not required | -34.04129676 | 151.0841328 |
| HABERFIELD | 7-Eleven Haberfield | 25-35 Parramatta ROAD | Service Station | Contamination currently regulated under CLM Act | -33.88794591 | 151.14287 |
| HALEKULANI | Former Halekulani Landfill | Macleay DRIVE | Landfill | Regulation under CLM Act not required | -33.21446301 | 151.5527625 |
| HAMILTON | SRA Land | 10 Maitland ROAD | Unclassified | Regulation under CLM Act not required | -32.91994358 | 151.7512417 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| HAMILTON | Caltex Hamilton | 59-63 Tudor STREET | Service Station | Regulation under CLM Act not required | -32.92498593 | 151.7509313 |
| HAMILTON | Newcastle Toyota | 65 Tudor STREET | Other Petroleum | Regulation under CLM Act not required | -32.925171 | 151.7504048 |
| HAMILTON | Taxi Services | 116 Tudor STREET | Service Station | Contamination formerly regulated under the CLM Act | -32.92351606 | 151.7454742 |
| HAMILTON | Hamilton Bus Depot | Cnr Denison Street and Gordon AVENUE | Other Petroleum | Regulation under CLM Act not required | -32.92687413 | 151.7501743 |
| HAMILTON NORTH | Shell Newcastle Terminal | 5 Chatham ROAD | Other Petroleum | Contamination formerly regulated under the CLM Act | -32.91630469 | 151.7408712 |
| HAMILTON NORTH | Former Black and Decker Site | 56 Clyde STREET | Metal Industry | Contamination currently regulated under CLM Act | -32.91080413 | 151.7358236 |
| HAMILTON NORTH | Hamilton Gasworks | 1 Chatham ROAD | Gasworks | Contamination currently regulated under CLM Act | -32.91362741 | 151.7406241 |
| HAMILTON NORTH | Former ELMA Site | 54 Clyde STREET | Other Industry | Contamination currently regulated under CLM Act | -32.91145768 | 151.7367691 |
| HARDEN | SRA Site | 31 Aurvill ROAD | Unclassified | Regulation under CLM Act not required | -34.54998656 | 148.3689577 |
| HARDEN | SRA Site | 51 Whitton LANE | Unclassified | Contamination formerly regulated under the CLM Act | -34.55396035 | 148.3713349 |
| HARDEN | South West Fuel Harden | 294 Albury STREET | Service Station | Regulation under CLM Act not required | -34.55007021 | 148.3513821 |
| HARDEN | Vacant land | 449 WHITTON LANE | Landfill | Under assessment | -34.554148 | 148.37171 |
| HAROLDS CROSS | Lot 59, Vernelly Road, Harolds Cross NSW 2622 | Lot 59, Vernelly ROAD | Other Industry | Regulation under CLM Act not required | -35.55528436 | 149.5560649 |
| HARRIS PARK | Dalley Street Reserve | 2A Dalley STREET | Other Industry | Regulation under CLM Act not required | -33.82749123 | 151.0097539 |
| HARTLEY VALE | Former Shale Oil Refinery | Lot 52 Hartley Vale ROAD | Unclassified | Contamination currently regulated under CLM Act | -33.52766912 | 150.2417878 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| HASTINGS POINT | Coles Express Hastings Point | 99 Tweed Coast ROAD | Service Station | Regulation under CLM Act not required | -28.36914103 | 153.5725676 |
| HAY | SRA Land | 429, 431, 435, 437 & 439 Murray STREET | Other Industry | Regulation under CLM Act not required | -34.49965611 | 144.840976 |
| HAY | SRA Land | 443 Murray STREET | Other Industry | Contamination formerly regulated under the CLM Act | -34.49966753 | 144.8410778 |
| HAY | Former Shell Hay Depot | 391 Murray STREET | Other Petroleum | Regulation under CLM Act not required | -34.50028195 | 144.8463999 |
| HAY | Former Mobil Depot Hay | 397-399 Murray STREET | Other Petroleum | Regulation under CLM Act not required | -34.50019184 | 144.8456578 |
| HAY SOUTH | Caltex Service Station | 429-431 Moama STREET | Service Station | Regulation under CLM Act not required | -34.52001427 | 144.8380121 |
| HAZELBROOK | Caltex Service Station Hazelbrook | 198 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.72106175 | 150.4520976 |
| HEATHCOTE | Caltex Service Station | 1344 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.08841066 | 151.0072048 |
| HEATHCOTE | Caltex Service Station | 1403 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.09059834 | 151.003752 |
| HEATHCOTE | Shell Coles Express Service Station | 1355 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.08780042 | 151.0069741 |
| HEATHERBRAE | Bogas (Former Caltex) Service Station | 3 Speedy Lock LANE | Service Station | Regulation under CLM Act not required | -32.78057822 | 151.7372135 |
| HEATHERBRAE | Shell Coles Express Motto Farm Service Station | 2137 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -32.79835449 | 151.7176284 |
| HEXHAM | QR National - Hexham Precinct | 179 & 3/67 Maitland ROAD | Other Industry | Regulation under CLM Act not required | -32.83474038 | 151.6821895 |
| HEXHAM | Caltex Diesel Stop | 360 Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.82844873 | 151.6851063 |
| HEXHAM | Cummins Newcastle Facility Hexham | 21 Galleghan STREET | Other Industry | Regulation under CLM Act not required | -32.83186739 | 151.686709 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| HEXHAM | BP Service Station (Reliance Petroleum) | Corner Pacific Highway and Old Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.82756403 | 151.6846929 |
| HEXHAM | Former Forgacs Site | 21 Sparke STREET | Chemical Industry | Under assessment | -32.85464558 | 151.6988053 |
| HEXHAM | Caltex-Bogas Warehouse | 239 Old Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.82899942 | 151.6861849 |
| HEXHAM | Industrial Galvanizers | 312 Pacific HIGHWAY | Metal Industry | Contamination currently regulated under POEO Act | -32.83457186 | 151.6884941 |
| HEXHAM | 14 Sparke St Hexham | 14 Sparke STREET | Metal Industry | Regulation under CLM Act not required | -32.85394328 | 151.6960863 |
| HILLSTON | Former BP Depot Hillston | 141-143 Cowper STREET | Other Petroleum | Regulation under CLM Act not required | -33.48823546 | 145.5381623 |
| HOLBROOK | Caltex Truckstop | Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -35.71332625 | 147.3207237 |
| HOMEBUSH | Ausgrid Mason Park Substation | 1 Underwood ROAD | Other Industry | Regulation under CLM Act not required | -33.85674677 | 151.0747044 |
| HOMEBUSH BAY | SUEZ Waste Recycling Centre (WRC) and Cleanaway Liquid Waste Treatment Plant (LWTP) | Corner Pondage Link and Hill ROAD | Landfill | Regulation under CLM Act not required | -33.84359299 | 151.0593656 |
| HOMEBUSH WEST | Caltex Service Station Homebush West | 334-336 Parramatta ROAD | Service Station | Regulation under CLM Act not required | -33.8581543 | 151.0681261 |
| HOMEBUSH WEST | Former Ford Landfill and Adjacent Land | 22 Mandemar AVENUE | Landfill | Regulation under CLM Act not required | -33.86142424 | 151.0625556 |
| HORNSBY | Midas Car Care Centre Hornsby | 2A Linda STREET | Other Industry | Regulation under CLM Act not required | -33.70052215 | 151.1004786 |
| HORNSBY | Coles Express Hornsby | 194- 206 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.7071993 | 151.0991452 |
| HORNSBY | Hornsby Train Maintenance Centre | 1B Stephen STREET | Other Industry | Regulation under CLM Act not required | -33.69370022 | 151.1035939 |
| HORNSBY HEIGHTS | Mountview Park and Oval | Kookaburra ROAD | Landfill | Regulation under CLM Act not required | -33.666253 | 151.094804 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| HORSELY PARK | Horsley Park | Part of 14 Johnston CRESCENT | Landfill | Under assessment | -33.831658 | 150.826843 |
| HOXTON PARK | Endeavour Energy Hoxton Park | 490 Hoxton Park ROAD | Other Industry | Regulation under CLM Act not required | -33.92766437 | 150.8689069 |
| HUNTERS HILL | Coles Express Hunters Hill | 4 Ryde ROAD | Service Station | Regulation under CLM Act not required | -33.8317985 | 151.141655 |
| HUNTERS HILL | Foreshore Land | Rear of 7, 9 & 11 Nelson PARADE | Other Industry | Contamination currently regulated under CLM Act | -33.84248362 | 151.1649249 |
| HUNTERS HILL | 7, 9 and 11 Nelson Parade Hunters Hill | 7, 9 and 11 Nelson PARADE | Other Industry | Regulation under CLM Act not required | -33.84220148 | 151.1649724 |
| HURLSTONE PARK | Former Telstra Depot | 82 Canterbury ROAD | Service Station | Regulation under CLM Act not required | -33.90803171 | 151.1258121 |
| HURLSTONE PARK | 7-Eleven Hurlstone Park | 670 New Canterbury ROAD | Service Station | Regulation under CLM Act not required | -33.90510388 | 151.1299825 |
| HURLSTONE PARK | Former Speedway Petroleum Service Station | 610 - 618 New Canterbury ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.90541228 | 151.1322009 |
| HURSTVILLE GROVE | Moore Reserve | Morshead DRIVE | Landfill | Contamination currently regulated under CLM Act | -33.97920603 | 151.0873578 |
| INGLEBURN | 7-Eleven Ingleburn | 72 Cumberland Road, corner Oxford ROAD | Service Station | Regulation under CLM Act not required | -34.00041505 | 150.8679742 |
| INGLEBURN | 85 Williamson Road, Ingleburn | 85 Williamson ROAD | Landfill | Under assessment | -34.00041505 | 150.8679742 |
| INVERELL | Former Shell Depot | 25 Edward STREET | Other Petroleum | Regulation under CLM Act not required | -29.76151684 | 151.1182033 |
| INVERELL | Former Service Station | 20 Oliver STREET | Service Station | Regulation under CLM Act not required | -29.77229743 | 151.1152692 |
| INVERELL | Former Caltex Depot Inverell | 4 Edward STREET | Service Station | Regulation under CLM Act not required | -29.76123104 | 151.1147983 |
| INVERELL | Former Mobil Inverell Depot | 29-33 Edward STREET | Other Petroleum | Regulation under CLM Act not required | -29.76135322 | 151.1171412 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| INVERELL | Caltex Service Station | 55-59 Ring STREET | Service Station | Regulation under CLM Act not required | -29.76204512 | 151.1141737 |
| INVERELL | Former Mobil Service Station | Corner Otho Street and Henderson STREET | Service Station | Regulation under CLM Act not required | -29.7786926 | 151.1149921 |
| INVERELL | Former Caltex Service Station | 141 Otho STREET | Service Station | Regulation under CLM Act not required | -29.77819403 | 151.1145699 |
| ISLINGTON | Caltex Service Station | 240 Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.91138644 | 151.7457701 |
| ISLINGTON | Shell Pipeline Easement (vacant land) | 24 Fern STREET | Other Petroleum | Regulation under CLM Act not required | -32.91706254 | 151.7473809 |
| JAMISONTOWN | BP Service Station Jamisontown | 124 - 128 Mulgoa ROAD | Service Station | Regulation under CLM Act not required | -33.76978323 | 150.6764977 |
| JAMISONTOWN | Former Caltex Jamisontown | 229-231 Mulgoa ROAD | Service Station | Regulation under CLM Act not required | -33.76661447 | 150.6784735 |
| JAMISONTOWN | 7-Eleven Service Station | 92 Mulgoa ROAD | Service Station | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.7667231 | 150.6796488 |
| JANNALI | Former Mobil Service Station | 121 Georges River ROAD | Service Station | Regulation under CLM Act not required | -34.01614613 | 151.0681921 |
| JANNALI | Former IGA | 541 Box ROAD | Other Industry | Regulation under CLM Act not required | -34.01602134 | 151.0660384 |
| JENNINGS | Jennings Former Arsenic Poison Factory | Duke Street, Manor Street, and Ballandean STREET | Chemical Industry | Contamination currently regulated under CLM Act | -28.929342 | 151.9298622 |
| JENNINGS | United Jennings Service Station | 1823 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -28.9323235 | 151.9260334 |
| JESMOND | Caltex Service Station | 27 Bluegum ROAD | Service Station | Regulation under CLM Act not required | -32.9029287 | 151.691164 |
| JINDABYNE | BP Service Station (Reliance Petroleum) | 8 Kosciuszko ROAD | Service Station | Regulation under CLM Act not required | -36.41478692 | 148.6178882 |
| JINDABYNE | Caltex Service Station | 50 Kosciuszko ROAD | Service Station | Regulation under CLM Act not required | -36.41395847 | 148.6225113 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| JINGELLIC | Former Jingellic School | 3179 River ROAD | Other Industry | Regulation under CLM Act not required | -35.92649487 | 147.7010655 |
| JUNEE | Subdivision Proposal | 5858 Gundagai ROAD | Unclassified | Regulation under CLM Act not required | -34.87783587 | 147.6067578 |
| JUNEE | United Junee Service Station | No. 118-134 BROADWAY | Service Station | Regulation under CLM Act not required | -34.86808328 | 147.5834883 |
| JUNEE | Junee Railway Workshops | 92 Harold STREET | Other Industry | Regulation under CLM Act not required | -34.88398375 | 147.5795301 |
| KANAHOOKA | Former Dapto Smelter Site, Kanahooka (redeveloped) | Off Kanahooka ROAD | Metal Industry | Regulation under CLM Act not required | -34.4941348 | 150.8224482 |
| KANDOS | Cement Australia Kandos Cement Works | 1 Jamison STREET | Other Industry | Regulation under CLM Act not required | -32.86399912 | 149.9779259 |
| KANWAL | Kanwal General Store and Fuel Supplies and Adjacent Land | 68 and part of 70 Craigie AVENUE | Service Station | Contamination currently regulated under CLM Act | -33.26310031 | 151.4817395 |
| KANWAL | Former Bus and Truck Rental Yard | 645-647 Pacific Highway HIGHWAY | Other Petroleum | Regulation under CLM Act not required | -33.26233802 | 151.4825469 |
| KARIONG | Coles Express Kariong | 6 Central Coast HIGHWAY | Service Station | Regulation under CLM Act not required | -33.43443192 | 151.2963401 |
| KARIONG | Caltex Service Station | Lot 2 Langford DRIVE | Service Station | Regulation under CLM Act not required | -33.43934827 | 151.2935447 |
| KARUAH | BP Roadhouse Karuah | 403 Tarean ROAD | Service Station | Regulation under CLM Act not required | -32.65371781 | 151.9629963 |
| KATOOMBA | Aldi Stores | 201 Katoomba STREET | Service Station | Regulation under CLM Act not required | -33.71756625 | 150.3101649 |
| KATOOMBA | Former Katoomba/Leura Gasworks | Megalong STREET | Gasworks | Contamination currently regulated under CLM Act | -33.71304308 | 150.3194624 |
| KELLYVILLE | Caltex Service Station | 3-5 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.71436125 | 150.9602175 |
| KELLYVILLE | BP Service Station Kellyville | 19-23 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.71280997 | 150.9590756 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| KELSO | Caltex Service Station Kelso | 19 Sydney ROAD | Service Station | Regulation under CLM Act not required | -33.41904247 | 149.6023985 |
| KELSO | BP Service Station (Reliance Petroleum) | 63 Sydney ROAD | Service Station | Regulation under CLM Act not required | -33.41925328 | 149.6076677 |
| KELSO | 23 Zagreb Street, Kelso NSW | 23 Zagreb STREET | Other Industry | Regulation under CLM Act not required | -33.42724599 | 149.609825 |
| KEMBLA GRANGE | ShawCor Australia | 66 West Dapto ROAD | Other Petroleum | Regulation under CLM Act not required | -34.46875328 | 150.8106326 |
| KEMBLAWARRA | Griffins Bay, Lake Illawarra | Shellharbour ROAD | Landfill | Regulation under CLM Act not required | -34.49653984 | 150.8943776 |
| KEMPS CREEK | Caltex-branded Service Station | 1163 Mamre ROAD | Service Station | Regulation under CLM Act not required | -33.86972102 | 150.7966074 |
| KEMPSEY | Kempsey Showground | 19 Sea STREET | Unclassified | Contamination being managed via the planning process (EP&A Act) | -31.07334836 | 152.8308795 |
| KEMPSEY | Former Shell Depot | 43-51 Gladstone STREET | Other Petroleum | Regulation under CLM Act not required | -31.07500944 | 152.8346699 |
| KEMPSEY | Former Mobil Depot | 14 Hopetoun STREET | Other Petroleum | Regulation under CLM Act not required | -31.07603107 | 152.8350132 |
| KEMPSEY | Shell Coles Express Service Station Kempsey | 165 Smith STREET | Service Station | Regulation under CLM Act not required | -31.07036743 | 152.8461571 |
| KEMPSEY | Mobil Depot | 154 Belgrave STREET | Service Station | Regulation under CLM Act not required | -31.07965043 | 152.8326303 |
| KEMPSEY | Liberty (Former Mobil) Service Station | 108-112 Smith STREET | Service Station | Regulation under CLM Act not required | -31.07492508 | 152.8431945 |
| KENSINGTON | 7-Eleven Kensington | 135 Anzac PARADE | Service Station | Regulation under CLM Act not required | -33.91035885 | 151.2228537 |
| KENSINGTON | Former Ampol Service Station | 76-82 Anzac PARADE | Service Station | Regulation under CLM Act not required | -33.9059246 | 151.2242891 |
| KENSINGTON | Footpath adjacent to 10-20 Anzac Parade | 10-20 Anzac PARADE | Service Station | Regulation under CLM Act not required | -33.9032124 | 151.2237836 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| KENSINGTON | Caltex Service Station | 211-213 Anzac PARADE | Service Station | Regulation under CLM Act not required | -33.91460752 | 151.2251266 |
| KENTHURST | Vacant Land | 259 McCylmonts ROAD | Unclassified | Regulation under CLM Act not required | -33.61283529 | 150.9425303 |
| KHANCOBAN | Khancoban Tip | Alpine WAY | Landfill | Regulation under CLM Act not required | -36.21994191 | 148.1542718 |
| KIAMA | Former Gasworks | 105 to 109 and 113 Shoalhaven STREET | Gasworks | Regulation under CLM Act not required | -34.67416881 | 150.8504143 |
| KIAMA HEIGHTS | Former Mobil Service Station Kiama | 7-9 South Kiama DRIVE | Service Station | Regulation under CLM Act not required | -34.69553931 | 150.8437977 |
| KILLARA | Killara Garage | 544 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.76974164 | 151.1599696 |
| KILLARA | 7-Eleven Service Station (Former Mobil) | 496 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.77146554 | 151.1606903 |
| KILLARA | Former Caltex Service Station | 692B-694 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.76306802 | 151.1550109 |
| KILLARA | Land Adjacent to Former Service Station Site | 684-684a, 690, 692 and 696 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.7631019 | 151.1548963 |
| KINCUMBER | Frost Reserve | Avoca DRIVE | Landfill | Contamination currently regulated under CLM Act | -33.47065695 | 151.3909044 |
| KINGS PARK | Multi-Fill | 14 Garling ROAD | Chemical Industry | Under assessment | -33.74478046 | 150.9111964 |
| KINGS PARK | Former Dow Corning Factory | 21 Tattersall ROAD | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.75012653 | 150.9138477 |
| KINGSFORD | Caltex Service Station | 603-611 Anzac PARADE | Service Station | Regulation under CLM Act not required | -33.93435787 | 151.2371198 |
| KINGSFORD | Coles Express Service Station Kingsford | 58 Gardeners ROAD | Service Station | Regulation under CLM Act not required | -33.9250054 | 151.2257601 |
| KINGSGROVE | Shell Coles Express Service Station | 137 Kingsgrove ROAD | Service Station | Regulation under CLM Act not required | -33.93276948 | 151.099026 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| KINGSGROVE | Caltex Kingsgrove | 351-357 Stoney Creek ROAD | Service Station | Regulation under CLM Act not required | -33.95132175 | 151.0926872 |
| KINGSGROVE | State Transit Authority Depot | 17-23 Richland STREET | Other Petroleum | Regulation under CLM Act not required | -33.93646086 | 151.0973617 |
| KINGSGROVE | 30A and 32 Commercial Road Kingsgrove | 30A and 32 Commercial ROAD | Other Industry | Regulation under CLM Act not required | -33.94022425 | 151.0974202 |
| KIRRAWEE | Ingal Civil Products | 127-141 Bath ROAD | Metal Industry | Regulation under CLM Act not required | -34.03029516 | 151.0754469 |
| KIRRAWEE | 7-Eleven (former Mobil) Service Station | 542-546 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.03238179 | 151.0758071 |
| KIRRAWEE | Caltex-branded Kirrawee Service Station | (1-3 Waratah Street) 487 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.02915971 | 151.0808279 |
| KOGARAH | Scarborough Park South | 184R Production AVENUE | Landfill | Regulation under CLM Act not required | -33.97922253 | 151.140276 |
| KOGARAH | Caltex Service Station | 29 President AVENUE | Service Station | Regulation under CLM Act not required | -33.96516866 | 151.141145 |
| KOGARAH | Former 7-Eleven Kogarah | 734 Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.96406472 | 151.1376011 |
| KOGARAH | Woolworths Petrol Service Station | 69 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.96330397 | 151.1371182 |
| KOOLKHAN | Former Koolkhan Power Station | Summerland WAY | Other Industry | Regulation under CLM Act not required | -29.61688704 | 152.9300645 |
| KOORAGANG | NPC, berths 2 and 3 | Heron ROAD | Metal Industry | Regulation under CLM Act not required | -32.89260063 | 151.7742527 |
| KOORAGANG | Kooragang Island Waste Facility | Off Cormorant ROAD | Metal Industry | Contamination currently regulated under POEO Act | -32.86901125 | 151.7377773 |
| KOORAGANG | Orica Kooragang Island | 15 Greenleaf ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -32.89654619 | 151.7771372 |
| KOORAGANG | Former Boral Timber Export Facility | 16 Heron ROAD | Other Industry | Regulation under CLM Act not required | -32.89710295 | 151.7739966 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| KOORAGANG | Cleanaway Technical Services | 19 Egret STREET | Other Industry | Regulation under CLM Act not required | -32.8812145 | 151.766282 |
| KOORAGANG | Industrial Facility | 39 Heron ROAD | Chemical Industry | Under assessment | -32.89106439 | 151.7784064 |
| KOORAGANG | Vacant Land | Raven Street and Cormorant ROAD | Unclassified | Regulation under CLM Act not required | -32.88410199 | 151.7701334 |
| KOORAGANG | 544 Cormorant Road, Kooragang | 544 Cormorant ROAD | Other Industry | Contamination currently regulated under CLM Act | -32.87480951 | 151.7757352 |
| KOORINGAL | Former Shell Wagga Depot | 11-15 Lake Albert ROAD | Other Petroleum | Regulation under CLM Act not required | -35.12273113 | 147.3786005 |
| KOORINGAL | Caltex Service Station | 265-267 Lake Albert ROAD | Service Station | Regulation under CLM Act not required | -35.14078443 | 147.3755442 |
| KOORINGAL | Caltex-branded (former Mobil) Service Station | 24 Lake Albert ROAD | Service Station | Regulation under CLM Act not required | -35.12239591 | 147.3769936 |
| KOSCIUSZKO | Smiggin Holes Snow Clearing Shed | Link ROAD | Landfill | Regulation under CLM Act not required | -36.39098211 | 148.4304981 |
| KOSCIUSZKO | Khancoban Spoil Dump | Alpine WAY | Landfill | Regulation under CLM Act not required | -36.21982803 | 148.1527401 |
| KOSCIUSZKO | Sawpit Creek landfill | 13km from Jindabyne, off Kosciuszko ROAD | Landfill | Regulation under CLM Act not required | -36.34858097 | 148.5673374 |
| KURMOND | BP Service Station | 501 Bells Line of road ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.55099195 | 150.6912536 |
| KURNELL | Former Phillips Imperial Chemicals site | 260 Captain Cook DRIVE | Chemical Industry | Regulation under CLM Act not required | -34.02493837 | 151.1952149 |
| KURNELL | Caltex Kurnell Terminal (refer also to IDC) | 2 Solander STREET | Other Petroleum | Contamination currently regulated under POEO Act | -34.0175214 | 151.2159572 |
| KURNELL | Former Caltex Kurnell Service Station | Corner Captain Cook Drive and Solander STREET | Service Station | Regulation under CLM Act not required | -34.01269846 | 151.2094347 |
| KURNELL | Abbott Australasia | Captain Cook DRIVE | Chemical Industry | Contamination formerly regulated under the CLM Act | -34.02339937 | 151.19921 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| KURNELL | Sydney Desalination Plant (SDP) | 21 Sir Joseph Banks DRIVE | Landfill | Under assessment | -34.022719 | 151.20473 |
| KURRI KURRI | United Petroleum Service Station Kurri Kurri | 279-281 Lang STREET | Service Station | Contamination formerly regulated under the CLM Act | -32.82047175 | 151.477646 |
| KURRI KURRI | Kurri Kurri Smelter | Hart ROAD | Metal Industry | Regulation under CLM Act not required | -32.7873063 | 151.4828827 |
| KYOGLE | Caltex Service Station | 22-24 Summerland WAY | Service Station | Regulation under CLM Act not required | -28.61806766 | 153.003862 |
| LAKE HAVEN | Caltex Service Station | Goobarabah Ave Cnr Gorokan DRIVE | Service Station | Regulation under CLM Act not required | -33.24337276 | 151.5065335 |
| LAKE ILLAWARRA | 22 Queen Street, Lake Illawarra NSW 2528 | 22 Queen STREET | Other Petroleum | Regulation under CLM Act not required | -34.547113 | 150.855097 |
| LAKEMBA | Former Lakemba Police Station | 59 Quigg STREET | Unclassified | Regulation under CLM Act not required | -33.92199239 | 151.079412 |
| LAKEMBA | Caltex Service Station - Corner Punchbowl Rd and Wangee Rd | 81 Wangee ROAD | Service Station | Regulation under CLM Act not required | -33.91153044 | 151.073306 |
| LAKEMBA | Caltex Service Station | 961-967 Canterbury ROAD | Service Station | Regulation under CLM Act not required | -33.92671102 | 151.0814905 |
| LAMBTON | Caltex Service Station | 422 Newcastle ROAD | Service Station | Regulation under CLM Act not required | -32.9095592 | 151.7109684 |
| LAMBTON | 4-26 Verulam Road, Lambton NSW 2299 | 4-26 Verulam ROAD | Metal Industry | Under assessment | -32.91130954 | 151.7170534 |
| LANE COVE | 7-Eleven Service Station | 203 Burns Bay ROAD | Service Station | Regulation under CLM Act not required | -33.81458334 | 151.1543844 |
| LANE COVE | BP-branded Jasbe Service Station | 62-70 Epping ROAD | Service Station | Regulation under CLM Act not required | -33.81108427 | 151.1641531 |
| LANE COVE | Pacific Power | Sirius ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.80701776 | 151.1449658 |
| LANE COVE | 331-335 Burns Bay Road, Lane Cove NSW 2066 | 331 and 333 - 335 Burns Bay ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -33.82095496 | 151.1493274 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| LANE COVE | Coles Express Service Station Burns Bay | 254 Burns Bay ROAD | Service Station | Regulation under CLM Act not required | -33.81719214 | 151.1518774 |
| LANE COVE NORTH | Former Caltex Service Station | 428-432 Mowbray ROAD | Service Station | Regulation under CLM Act not required | -33.80804563 | 151.1721538 |
| LANE COVE NORTH | BP Artarmon Service Station, Lane Cove North | 432 Pacific HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.8112038 | 151.175547 |
| LANE COVE WEST | Lovetts Reserve Walking Track | 301B Burns Bay ROAD | Unclassified | Contamination formerly regulated under the CLM Act | -33.82044223 | 151.1492125 |
| LANE COVE WEST | Caltex Lane Cove West | 235-245 Burns Bay ROAD | Service Station | Regulation under CLM Act not required | -33.81719214 | 151.1518774 |
| LANE COVE WEST | Ventemans Reach Bushland | Off Mars ROAD | Unclassified | Regulation under CLM Act not required | -33.80499552 | 151.1450719 |
| LANE COVE WEST | 315-317 Burns Bay Road, Lane Cove West | 315-317 Burns Bay ROAD | Unclassified | Regulation under CLM Act not required | -33.82065224 | 151.1496027 |
| LANSVALE | Mobil Service Station | 44 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.89172416 | 150.9656537 |
| LAURIETON | Camden Haven Tyre and Brake Centre (Former Caltex Service Station) | 461 Ocean DRIVE | Service Station | Regulation under CLM Act not required | -31.64367775 | 152.7977735 |
| LAVENDER BAY | SRA Land | French STREET | Unclassified | Regulation under CLM Act not required | -33.84560621 | 151.2030148 |
| LAVINGTON | Former Caltex Service Station | 373-375 Wagga ROAD | Service Station | Regulation under CLM Act not required | -36.04797551 | 146.9385325 |
| LAVINGTON | Caltex Service Station | 436 Wagga (corner Dick Road) ROAD | Service Station | Regulation under CLM Act not required | -36.04500034 | 146.9444932 |
| LAVINGTON | Former ERS liquid waste treatment and storage facility | 819 Knights ROAD | Other Industry | Regulation under CLM Act not required | -36.06763885 | 146.942143 |
| LEETON | Former Mobil Depot | 108 Calrose STREET | Other Petroleum | Regulation under CLM Act not required | -34.55813326 | 146.3921296 |
| LEETON | Caltex Service Station | 1 Belah STREET | Service Station | Regulation under CLM Act not required | -34.55421752 | 146.3998431 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| LEETON | Yenda Producers (formerly Incitec) Leeton | 1 - 2 Canal STREET | Other Petroleum | Regulation under CLM Act not required | -34.55184684 | 146.3862573 |
| LEETON | Former Fuel Depot, Leeton | 1-3 Short STREET | Other Petroleum | Regulation under CLM Act not required | -34.55253237 | 146.3864507 |
| LEETON | United Leeton Service Station | 110 Kurrajong AVENUE | Service Station | Regulation under CLM Act not required | -34.55573364 | 146.4099077 |
| LEICHHARDT | Former Kolotex site | 22 George STREET | Other Industry | Contamination currently regulated under CLM Act | -33.88855307 | 151.1482106 |
| LEICHHARDT | Leichhardt Bus Depot Area E | 240 Balmain Road, corner City West LINK | Other Industry | Regulation under CLM Act not required | -33.87589727 | 151.1598073 |
| LEICHHARDT | SRA Land | 10-11 Balmain ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -33.8776803 | 151.1591041 |
| LEICHHARDT | Former Labelcraft Site | 30-40 George STREET | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.88778798 | 151.1484773 |
| LEICHHARDT | RailCorp Leichhardt | 7 Darley ROAD | Other Industry | Regulation under CLM Act not required | -33.87520846 | 151.1539012 |
| LENNOX HEAD | Former Caltex Lennox Head | Byron STREET | Service Station | Regulation under CLM Act not required | -28.79189328 | 153.5883225 |
| LENNOX HEAD | Spoors Dip | 13 Fig Tree Hill DRIVE | Cattle Dip | Contamination formerly regulated under the CLM Act | -28.78258175 | 153.5752527 |
| LEPPINGTON | Coles Express Leppington | 1443 Camden Valley WAY | Service Station | Regulation under CLM Act not required | -33.96631609 | 150.8154793 |
| LEUMEAH | Caltex Service Station | 6 Rudd ROAD | Service Station | Regulation under CLM Act not required | -34.05398325 | 150.8299209 |
| LEURA | Former Leura Garage | 126-128 Leura MALL | Service Station | Regulation under CLM Act not required | -33.7125311 | 150.3315386 |
| LIDCOMBE | Metro Lidcombe (former Liberty) | 134 John STREET | Service Station | Contamination currently regulated under POEO Act | -33.85456019 | 151.0468136 |
| LIDDELL | Liddell Power Station | New England HIGHWAY | Other Industry | Regulation under CLM Act not required | -32.37393962 | 150.9756283 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| LIDSDALE | Angus Place Colliery | Wolgan ROAD | Other Industry | Regulation under CLM Act not required | -33.35274573 | 150.0996773 |
| LIDSDALE | Kerosene Vale Colliery | Wolgan ROAD | Other Industry | Regulation under CLM Act not required | -33.38232515 | 150.0943561 |
| LIDSDALE | Kerosene Vale Ash Repository | 110 Skelly ROAD | Other Industry | Contamination currently regulated under CLM Act | -33.39095144 | 150.1049798 |
| LIDSDALE | Lot 424 Walgan Road, Lidsdale | Lot 424 Walgan ROAD | Other Industry | Regulation under CLM Act not required | -33.382457 | 150.083557 |
| LIGHTNING RIDGE | Former Ambulance Station | 18 - 42 Pandora STREET | Other Industry | Regulation under CLM Act not required | -29.43133877 | 147.9812981 |
| LIGHTNING RIDGE | Caltex Service Station | Onyx Street, corner Morilla STREET | Service Station | Regulation under CLM Act not required | -29.42922885 | 147.9747954 |
| LILLIAN ROCK | Former 'Peters Dip' Cattle Tick Dip Site | 427 Lillian Rock ROAD | Cattle Dip | Regulation under CLM Act not required | -28.5314327 | 153.1556392 |
| LINDFIELD | Former BP Service Station Lindfield | 478 Pacific HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.7719298 | 151.1613874 |
| LINDFIELD | 7-Eleven (former Mobil) Service Station | 238 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.7788603 | 151.1689594 |
| LINDFIELD | 1 Roxy Place, Lindfield | 1 Roxy PLACE | Unclassified | Under assessment | -33.787503 | 151.16021 |
| LISAROW | OneSteel Recycling | 902A Pacific HIGHWAY | Metal Industry | Regulation under CLM Act not required | -33.38420179 | 151.3655856 |
| LISMORE | Caltex Lismore Service Station | 136 Woodlark STREET | Service Station | Regulation under CLM Act not required | -28.80807597 | 153.2807591 |
| LISMORE | Shell Coles Express Service Station | 100 Dawson STREET | Service Station | Regulation under CLM Act not required | -28.81140865 | 153.2800472 |
| LISMORE | Former Shell Depot | 116 Wilson STREET | Other Petroleum | Regulation under CLM Act not required | -28.81070081 | 153.2621577 |
| LISMORE | Lismore Gasworks | Cnr John Street & Keen STREET | Gasworks | Contamination formerly regulated under the CLM Act | -28.81764489 | 153.2710196 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| LISMORE | Caltex Service Station | 73-75 Dawson STREET | Service Station | Regulation under CLM Act not required | -28.80894415 | 153.2809619 |
| LISMORE | SRA Land | Norco LANE | Unclassified | Regulation under CLM Act not required | -28.810742 | 153.2702306 |
| LISMORE HEIGHTS | Coles Express Lismore Heights | 426 Ballina ROAD | Service Station | Contamination currently regulated under CLM Act | -28.81068067 | 153.3053065 |
| LISMORE HEIGHTS | Impacted land, below Beardow Street landslide | 22 New Ballina ROAD | Unclassified | Regulation under CLM Act not required | -28.80410458 | 153.2939349 |
| LISMORE HEIGHTS | Roadside Embankment (Beardow Street) | Between Beardow and 22 New Ballina ROAD | Unclassified | Regulation under CLM Act not required | -28.80374297 | 153.2942495 |
| LITHGOW | Former Shell CVRO and Depot | 77 Bridge Street and 6 Gas Works LANE | Other Petroleum | Regulation under CLM Act not required | -33.47995091 | 150.162216 |
| LITHGOW | Lithgow Small Arms Factory | 4 Martini PARADE | Metal Industry | Under assessment | -33.48988084 | 150.141366 |
| LITHGOW | Former Mobil Depot | 353 Main STREET | Other Petroleum | Regulation under CLM Act not required | -33.48235166 | 150.1383012 |
| LITHGOW | Former Gasworks | Mort STREET | Gasworks | Regulation under CLM Act not required | -33.47995167 | 150.1635401 |
| LITHGOW | Jasbe BP-branded Service Station (Former Reliance Petroleum) | 1106 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.48426647 | 150.134992 |
| LITHGOW | Caltex Lithgow (Quota Park) | Adjacent to 1131 Great Western HIGHWAY | Unclassified | Regulation under CLM Act not required | -33.47927554 | 150.1366238 |
| LIVERPOOL | AC McGrath (Wholesale) Pty Ltd | 20 Shepherd Street and 6A & 6B Atkinson STREET | Other Industry | Regulation under CLM Act not required | -33.9320192 | 150.9236862 |
| LIVERPOOL | Former Car Park | 4 - 6 Rose STREET | Unclassified | Regulation under CLM Act not required | -33.93258955 | 150.9157936 |
| LIVERPOOL | Woolworths Service Station | 59-67 Orange Grove ROAD | Service Station | Regulation under CLM Act not required | -33.90711248 | 150.9178855 |
| LIVERPOOL | 68 Speed Street (former gasworks) | 2A Mill ROAD | Gasworks | Regulation under CLM Act not required | -33.92992649 | 150.9224472 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| LIVERPOOL | Woodward Park | 84 Memorial AVENUE | Other Industry | Regulation under CLM Act not required | -33.92477836 | 150.9169229 |
| LIVERPOOL | Hoxton Park Bus Depot - Len Waters Estate | Lot 2, Airfield DRIVE | Other Industry | Regulation under CLM Act not required | -33.91534402 | 150.852797 |
| LOFTUS | BP Freedom Fuel Service Station Loftus | 127 Loftus AVENUE | Service Station | Regulation under CLM Act not required | -34.04570765 | 151.0508004 |
| LONG JETTY | Metro Petroleum Service Station Long Jetty | 326 The Entrance ROAD | Service Station | Under assessment | -33.35897356 | 151.4847709 |
| LONG JETTY | Caltex Service Station | 431 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.36022468 | 151.4826553 |
| LONG JETTY | Westside Petroleum Service Station | 290-294 The Entrance ROAD | Service Station | Contamination currently regulated under CLM Act | -33.35686757 | 151.4861479 |
| LONG JETTY | 7-Eleven (former Mobil) Service Station | 184-186 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.35089363 | 151.4924904 |
| LONGUEVILLE | Caltex Service Station | 5 Northwood ROAD | Service Station | Regulation under CLM Act not required | -33.82427366 | 151.1724497 |
| LOXFORD | Kurri Kurri Wastewater Treatment Plant | McLeod ROAD | Other Industry | Regulation under CLM Act not required | -32.80593657 | 151.4843665 |
| LUCAS HEIGHTS | Harringtons Quarry | access from Little Forest ROAD | Landfill | Contamination currently regulated under CLM Act | -34.03555347 | 150.9751826 |
| LUCAS HEIGHTS | IWC landfill | Little Forest ROAD | Landfill | Contamination formerly regulated under the CLM Act | -34.03214889 | 150.9753474 |
| LUCAS HEIGHTS | Sydney Clay Target Club | Heathcote ROAD | Other Industry | Under assessment | -34.042114 | 150.959833 |
| LUDDENHAM | Caltex Service Station | 3019-3035 The Northern ROAD | Service Station | Regulation under CLM Act not required | -33.87536093 | 150.6888872 |
| MACKSVILLE | Caltex Service Station | Pacific (22-24 Cooper Street) HIGHWAY | Service Station | Regulation under CLM Act not required | -30.70977455 | 152.9198448 |
| MACLEAN | MacLean Outdoors | 255 River STREET | Service Station | Regulation under CLM Act not required | -29.45782683 | 153.1970725 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MACLEAN | Area of road corridor fronting 249 River Street, Maclean NSW 2463 | 249 River STREET | Service Station | Under assessment | -29.457286 | 153.19695 |
| MACQUARIE FIELDS | Caltex Service Station | 68 Harold STREET | Service Station | Regulation under CLM Act not required | -33.98557276 | 150.8933681 |
| MACQUARIE PARK | Caltex North Ryde Service Station | 41-43 Epping ROAD | Service Station | Regulation under CLM Act not required | -33.79138236 | 151.1312248 |
| MACQUARIE PARK | 1-7 Waterloo Road, Macquarie Park | 1-7 Waterloo ROAD | Other Petroleum | Regulation under CLM Act not required | -33.78806877 | 151.1332148 |
| MACQUARIE PARK | Porters Creek Depot - Proposed Operations Centre Site | 160 Wicks ROAD | Landfill | Regulation under CLM Act not required | -33.78581579 | 151.1367075 |
| MACQUARIE PARK | De Burghs Cycleway - Lane Cove National Park | Riverside DRIVE | Other Petroleum | Regulation under CLM Act not required | -33.77668985 | 151.136542 |
| MAITLAND | Maitland Gasworks | Charles STREET | Gasworks | Contamination currently regulated under CLM Act | -32.73603658 | 151.5578926 |
| MAITLAND | Hannan and High Street | Hannan Street and High STREET | Service Station | Regulation under CLM Act not required | -32.72731682 | 151.5515673 |
| MAITLAND | Coles Express Service Station | 235 High STREET | Service Station | Regulation under CLM Act not required | -32.73923807 | 151.5620399 |
| MALABAR | ANZAC Rifle Range former landfill | Franklin STREET | Landfill | Regulation being finalised | -33.95792671 | 151.2566373 |
| MANDALONG | Mandalong Mine | Mandalong ROAD | Other Industry | Regulation under CLM Act not required | -33.11725583 | 151.4616452 |
| MANGROVE MOUNTAIN | Poultry Litter Containment Pit site | 258 Waratah ROAD | Unclassified | Regulation under CLM Act not required | -33.28917947 | 151.1672284 |
| MANILLA | Tamworth Regional Council Works Depot - Manilla | 73 River STREET | Other Petroleum | Regulation under CLM Act not required | -30.74879943 | 150.7181011 |
| MANLY | Caltex Service Station | 86 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.79306889 | 151.2858638 |
| MANLY | Open Space at end of Stuart Street (Lot 1 DP544297) | End of Stuart STREET | Gasworks | Regulation under CLM Act not required | -33.8078063 | 151.2898273 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MANLY | St Patrick's Estate | 151 Darley ROAD | Unclassified | Regulation under CLM Act not required | -33.8044568 | 151.2938595 |
| MANLY | Former Little Manly Point Gasworks | Stuart STREET | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.8081596 | 151.287697 |
| MANLY VALE | Caltex Service Station Manly Vale | 236-238 Condamine STREET | Service Station | Regulation under CLM Act not required | -33.78508231 | 151.2674386 |
| MANLY VALE | Former Landfill Addiscombe Road | Addiscombe ROAD | Landfill | Contamination currently regulated under CLM Act | -33.78307439 | 151.2747846 |
| MANNERING PARK | Parkview General Store (a former service station) | 2 Vales ROAD | Service Station | Regulation under CLM Act not required | -33.14753814 | 151.5387832 |
| MANNERING PARK | Mannering Park Mini Mart | 70 Vales ROAD | Service Station | Regulation under CLM Act not required | -33.15236501 | 151.5371767 |
| MARAYONG | 7-Eleven (former Mobil Blacktown West) Service Station Marayong | 173 Richmond ROAD | Service Station | Regulation under CLM Act not required | -33.75472796 | 150.8913605 |
| MARAYONG | Woolworths Petrol Service Station Marayong | Corner Vardys Road and Turbo ROAD | Service Station | Regulation under CLM Act not required | -33.7452356 | 150.9041601 |
| MARDI | Former Mardi Landfill | 70-90 McPherson ROAD | Landfill | Regulation under CLM Act not required | -33.29273289 | 151.4100941 |
| MARKS POINT | Former Mobil Aviation Depot Belmont Airport | 864 Pacific HIGHWAY | Other Petroleum | Regulation under CLM Act not required | -33.06657244 | 151.6497674 |
| MARKS POINT | Former Mobil Service Station (now 7-Eleven) | 770-772 Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -33.05646268 | 151.6533795 |
| MAROUBRA | Coles Express Pagewood Service Station, Maroubra | 299 Bunnerong PARADE | Service Station | Regulation under CLM Act not required | -33.94071282 | 151.2285063 |
| MARRANGAROO | United (Former Mobil) Service Station Marrangaroo | 394-398 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.45253322 | 150.1181023 |
| MARRICKVILLE | Former Mobil Service Station | 384 Illawarra ROAD | Service Station | Regulation under CLM Act not required | -33.91534969 | 151.1506717 |
| MARRICKVILLE | TRW Steering and Suspension | 22-28 Carrington ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.92012667 | 151.1566181 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MARRICKVILLE | Woolworths Petrol Service Station Marrickville | 490 Illawarra ROAD | Service Station | Regulation under CLM Act not required | -33.91845177 | 151.1459951 |
| MARRICKVILLE | Cooks River Aqueduct | Thornley STREET | Unclassified | Contamination formerly regulated under the CLM Act | -33.92224311 | 151.1479744 |
| MARRICKVILLE | RailCorp | 361 Victoria ROAD | Other Industry | Regulation under CLM Act not required | -33.91404835 | 151.1557132 |
| MARRICKVILLE | Mackey Park | Cnr Richardsons Crescent and Carrington ROAD | Landfill | Regulation under CLM Act not required | -33.9220263 | 151.1547903 |
| MARRICKVILLE | 2 Carrington Road | 2 Carrington ROAD | Unclassified | Regulation under CLM Act not required | -33.91567088 | 151.1589931 |
| MARRICKVILLE | Former Dry Cleaners and Loading Dock | Smidmore STREET | Other Industry | Contamination currently regulated under CLM Act | -33.90752498 | 151.1717761 |
| MARSDEN PARK | 226 Grange Avenue | 226 Grange AVENUE | Unclassified | Regulation under CLM Act not required | -33.70259609 | 150.83825 |
| MARSFIELD | Coles Express Service Station Marsfield | 189 Epping ROAD | Service Station | Regulation under CLM Act not required | -33.77519246 | 151.1053691 |
| MARULAN | BP Express Marulan (Northbound) | (Northbound) Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.7188332 | 149.9949547 |
| MARULAN | BP Service Station | (Southbound) Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.71932066 | 150.0014827 |
| MARYVILLE | 7-Eleven Service Station | 184-188 Hannell STREET | Service Station | Contamination formerly regulated under the CLM Act | -32.91336028 | 151.7579315 |
| MARYVILLE | Former Mobile Terminal Maryville | Portside Business Park ROAD | Other Petroleum | Under preliminary investigation order | -32.911434 | 151.758752 |
| MASCOT | BP Mascot | 1077 Botany ROAD | Service Station | Under assessment | -33.92839 | 151.19501 |
| MASCOT | Former Zinc Smelter and Paint Manufacturing Facility | 163 O'Riordan STREET | Metal Industry | Regulation under CLM Act not required | -33.92526513 | 151.1892582 |
| MASCOT | Caltex Service Station | 125 O'Riordan STREET | Service Station | Regulation under CLM Act not required | -33.92309169 | 151.1911539 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MASCOT | Mascot Pioneer Plating | 25-29 Ricketty STREET | Metal Industry | Contamination currently regulated under CLM Act | -33.92075288 | 151.1824801 |
| MASCOT | Heritage Business Centre | 5-9 Ricketty STREET | Unclassified | Regulation under CLM Act not required | -33.92029202 | 151.1816656 |
| MASCOT | Telstra Exchange | 904-922 Botany ROAD | Other Industry | Regulation under CLM Act not required | -33.9293166 | 151.1942777 |
| MASCOT | Former Shell Service Station Mascot | 746 Botany ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.92352295 | 151.1955852 |
| MASCOT | Former Freight Distribution Facility (now High-Density Residential / Commercial) | 19-33 Kent ROAD | Unclassified | Regulation under CLM Act not required | -33.9227711 | 151.1854202 |
| MASCOT | Former Mascot Galvanising | 336-348 King STREET | Metal Industry | Contamination currently regulated under CLM Act | -33.92902126 | 151.185874 |
| MASCOT | Sokol Corporation | 50-56 Robey STREET | Other Industry | Regulation under CLM Act not required | -33.93162265 | 151.1904955 |
| MASCOT | Linear Park | Off O'Riordan STREET | Landfill | Regulation under CLM Act not required | -33.92278693 | 151.1904751 |
| MASCOT | Aston, Gardeners Rd Mascot | 551-559 Gardeners ROAD | Unclassified | Regulation under CLM Act not required | -33.921733 | 151.195359 |
| MATRAVILLE | Port Botany Bus Depot | 7 Bumborah Point ROAD | Other Petroleum | Regulation under CLM Act not required | -33.96880413 | 151.2255889 |
| MATRAVILLE | Former Golden Fleece Terminal No2 | 151 Beauchamp ROAD | Other Petroleum | Contamination formerly regulated under the CLM Act | -33.95719404 | 151.2259884 |
| MATRAVILLE | 7-Eleven Service Station Matraville | 515 Bunnerong ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.95943536 | 151.2317598 |
| MATRAVILLE | Former Golden Fleece Terminal No1 | 133 -149 Beauchamp ROAD | Other Petroleum | Contamination formerly regulated under the CLM Act | -33.95759006 | 151.2252023 |
| MATRAVILLE | Former Rieco Incinerator | Kain AVENUE | Other Industry | Contamination being managed via the planning process (EP&A Act) | -33.95980534 | 151.2423679 |
| MATRAVILLE | Vacant Lot | 3 Wilkes AVENUE | Other Industry | Regulation under CLM Act not required | -33.96006406 | 151.2431087 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MATRAVILLE | Eastern Suburbs Memorial Park | 12 Military ROAD | Chemical Industry | Regulation under CLM Act not required | -33.9719906 | 151.2274386 |
| MATRAVILLE | 42-52 Raymond Avenue, Matraville NSW | 42-52 Raymond AVENUE | Other Industry | Regulation under CLM Act not required | -33.961817 | 151.222098 |
| MATRAVILLE | Opal Packaging Botany Mill | 1891 Botany ROAD | Other Industry | Under assessment | -33.96438 | 151.225016 |
| MAYFIELD | 7-Eleven (Former Mobil) Service Station | 412-416 Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.89292005 | 151.7300948 |
| MAYFIELD | Shell Coles Express Service Station | 63-69 Maud STREET | Service Station | Regulation under CLM Act not required | -32.89358962 | 151.7221298 |
| MAYFIELD | Australian Tube Mills Newcastle Site | Industrial DRIVE | Metal Industry | Under assessment | -32.88835767 | 151.7450751 |
| MAYFIELD | BHP Steel River | The Buffer Zone' extending directly adjacent to the Hunter River; near the Tourle Street Bridge STREET | Metal Industry | Contamination currently regulated under CLM Act | -32.8773556 | 151.7252427 |
| MAYFIELD | Hunter River Sediments | Bed Sediments of the Hunter adjacent to Lot 221 DP1013964 RIVER | Metal Industry | Contamination formerly regulated under the CLM Act | -32.89203741 | 151.7646702 |
| MAYFIELD | Waratah Steel Mill | 23 Frith STREET | Metal Industry | Regulation under CLM Act not required | -32.89426592 | 151.7257429 |
| MAYFIELD | OneSteel (BHP) | Industrial DRIVE | Metal Industry | Contamination currently regulated under CLM Act | -32.88365878 | 151.7448793 |
| MAYFIELD NORTH | BHPB Closure site and bed sediments of the Hunter River | Bound by Hunter River, Selwyn Street & Industrial DRIVE | Metal Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -32.89436064 | 151.7590762 |
| MAYFIELD NORTH | OneSteel - Newcastle Wire, Rod and Bar Mills | 141 & 151 Ingall STREET | Metal Industry | Under assessment | -32.89008485 | 151.752949 |
| MAYFIELD NORTH | Former BHPB Supply site | Industrial DRIVE | Metal Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -32.88583061 | 151.7386157 |
| MAYFIELD NORTH | Swing Basin allotment on former Onesteel site - Lot 2 DP 1184252 | 151B Ingall STREET | Metal Industry | Under assessment | -32.880881 | 151.744457 |
| MAYFIELD WEST | Stevenson Park landfill | 2/559 Maitland ROAD | Landfill | Regulation under CLM Act not required | -32.88472556 | 151.7224791 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MAYFIELD WEST | Koppers Coal Tar | East of Woodstock Street and Tourle STREET | Other Industry | Contamination currently regulated under POEO Act | -32.88592437 | 151.7361839 |
| MAYFIELD WEST | Tourle Street Bridge Project | Tourle STREET | Landfill | Regulation under CLM Act not required | -32.88075518 | 151.7330073 |
| MCDOUGALLS HILL | Caltex Service Station | 4949 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -32.54484714 | 151.1490757 |
| MEADOWBANK | Former Council Works Depot | 2 Parsonage STREET | Unclassified | Regulation under CLM Act not required | -33.82191421 | 151.0951974 |
| MENAI | Caltex Service Station Menai | 1 Carter Road ROAD | Service Station | Regulation under CLM Act not required | -34.01654043 | 151.0124133 |
| MENAI | 7-Eleven (Former Mobil) Service Station Menai | 289 Menai ROAD | Service Station | Contamination formerly regulated under the CLM Act | -34.01579095 | 151.0131737 |
| MENANGLE | 285 Finns Road, Menangle NSW | 285 Finns ROAD | Unclassified | Regulation under CLM Act not required | -34.1291386 | 150.7010393 |
| MEREWETHER | Merewether Childcare Centre | 2/23 Caldwell STREET | Unclassified | Regulation under CLM Act not required | -32.94249653 | 151.7504279 |
| MEREWETHER HEIGHTS | Burwood Beach Wastewater Treatment Works | Lot 1, Scenic DRIVE | Other Industry | Regulation under CLM Act not required | -32.95401348 | 151.7412468 |
| MERIMBULA | Caltex Service Station | 19-25 Merimbula DRIVE | Service Station | Regulation under CLM Act not required | -36.88757881 | 149.9089159 |
| MERIMBULA | Former Mobil Service Station | 27 Market STREET | Service Station | Regulation under CLM Act not required | -36.88941693 | 149.9103485 |
| MERRYLANDS | Former Timber Yard and Hardware | 11-19 Centenary ROAD | Other Petroleum | Regulation under CLM Act not required | -33.83083025 | 150.9698915 |
| MERRYLANDS | Caltex Service Station | 229 Woodville ROAD | Service Station | Regulation under CLM Act not required | -33.84547463 | 150.9983413 |
| MERRYLANDS | Caltex Service Station Merrylands | 148 Woodville ROAD | Service Station | Regulation under CLM Act not required | -33.83818499 | 150.9997199 |
| MERRYLANDS | Stockland Merrylands Court | 249-259 Merrylands ROAD | Service Station | Regulation under CLM Act not required | -33.83560037 | 150.9869735 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MERRYLANDS | 7-Eleven Merrylands Service Station | 295-297 Merrylands Road, corner Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.83533205 | 150.9851801 |
| MERRYLANDS | Former Stockfeed Manufacturing Site | 1-7 & 9-11 Neil STREET | Other Petroleum | Regulation under CLM Act not required | -33.83390257 | 150.9947449 |
| MERRYLANDS WEST | Former Mobil Service Station | 3 Centenary ROAD | Service Station | Regulation under CLM Act not required | -33.83214226 | 150.9698958 |
| MILLER | Caltex Service Station | 86 Cartwright AVENUE | Service Station | Regulation under CLM Act not required | -33.91878146 | 150.8827514 |
| MILLERS FOREST | Chichester Trunk Gravity Main | water pipeline ACCESS | Other Industry | Contamination currently regulated under POEO Act | -32.772877 | 151.6826841 |
| MILLERS POINT | Former AGL Gasworks | 30 - 34 Hickson ROAD | Gasworks | Regulation under CLM Act not required | -33.86179594 | 151.2031726 |
| MILLERS POINT | Moores Wharf UPSS | 4 Towns PLACE | Other Petroleum | Regulation under CLM Act not required | -33.85581123 | 151.2024759 |
| MILLERS POINT | Former AGL Gasworks | 38 Hickson and road reserve ROAD | Gasworks | Contamination being managed via the planning process (EP&A Act) | -33.86280104 | 151.2032452 |
| MILLERS POINT | Former AGL Gasworks | Berths 5, 6 and 7 (already demolished) and part Hickson ROAD | Gasworks | Contamination formerly regulated under the CLM Act | -33.86239771 | 151.2024819 |
| MILLERS POINT | Former AGL Gasworks 36 Hickson Road | 36 Hickson ROAD | Gasworks | Contamination formerly regulated under the CLM Act | -33.86243824 | 151.2032514 |
| MILPERRA | Heatcraft Australia Pty Ltd | 286 Horsley ROAD | Other Industry | Regulation under CLM Act not required | -33.94031556 | 150.9958606 |
| MILPERRA | United Group Rail Pty Limited | 373 Horsley ROAD | Landfill | Regulation under CLM Act not required | -33.93286283 | 150.9934071 |
| MILPERRA | Caltex Service Station | 264 Milperra ROAD | Service Station | Regulation under CLM Act not required | -33.93018101 | 150.9910964 |
| MILPERRA | Former Landfill | 479 Henry Lawson DRIVE | Landfill | Regulation under CLM Act not required | -33.93394617 | 150.9776715 |
| MILPERRA | Riverlands Milperra Property | 54 Auld AVENUE | Landfill | Regulation under CLM Act not required | -33.930869 | 150.97132 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MILTON | Former Sanitary Depot | Slaughterhouse ROAD | Other Industry | Regulation under CLM Act not required | -35.33819825 | 150.4471917 |
| MILTON | Caltex Milton Service Station and Depot | 331 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.33154474 | 150.4492852 |
| MINCHINBURY | 7-Eleven (former Mobil) Service Station | 815 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.78812909 | 150.8495992 |
| MINCHINBURY | BP Service Station | 1055 Great Western Highway corner Archbold ROAD | Service Station | Regulation under CLM Act not required | -33.78211857 | 150.8244185 |
| MINTO | Land adjacent to Former Shell depot | Airds Road and Essex STREET | Other Petroleum | Regulation under CLM Act not required | -34.02140447 | 150.8415134 |
| MINTO | Shell Coles Express Service Station | 73 Pembroke STREET | Service Station | Regulation under CLM Act not required | -34.02316454 | 150.8503118 |
| MINTO | Former Endeavour Energy Depot | Pembroke ROAD | Other Petroleum | Regulation under CLM Act not required | -34.0408973 | 150.8451837 |
| MINTO | Logistics Hub - Culverston Road, Minto | Culverston ROAD | Other Petroleum | Regulation under CLM Act not required | -34.0421711 | 150.833825 |
| MIRANDA | Woolworths Service Station | 455 Kingsway OTHER | Service Station | Contamination currently regulated under CLM Act | -34.03492814 | 151.1124681 |
| MITTAGONG | Enhance (former Coles Express) Service Station | 224 Old Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.44746118 | 150.4326183 |
| MITTAGONG | Lots 1 and 2 Alfred St. | Alfred STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -34.44738105 | 150.4565159 |
| MITTAGONG | Caltex Mittagong Service Station | 65 Bowral ROAD | Service Station | Regulation under CLM Act not required | -34.45245915 | 150.4381291 |
| MOAMA | Caltex Moama Service Station | 73 Meninya (Cnr Regent St) STREET | Service Station | Regulation under CLM Act not required | -36.10815134 | 144.752849 |
| MOLONG | Cabonne BP Service Station | 2 Gidley STREET | Service Station | Contamination currently regulated under CLM Act | -33.09026307 | 148.8695809 |
| MOLONG | Former Gasworks | Hill STREET | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.09074595 | 148.8703262 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MONA VALE | Mona Vale Bus Depot | 58 Darley STREET | Other Petroleum | Contamination currently regulated under CLM Act | -33.67452414 | 151.3074246 |
| MONA VALE | Former Caltex service station and adjacent properties | 79 Barrenjoey Road, 2 Polo Avenue, 6 Polo Avenue, 45 Bassett STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.6743659 | 151.3096932 |
| MONA VALE | Caltex Investigation Area | Polo Ave, Perak STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.67431333 | 151.3091148 |
| MONA VALE | 7-Eleven (former Mobil) Service Station | 24 Barrenjoey ROAD | Service Station | Regulation under CLM Act not required | -33.676909 | 151.3082515 |
| MONA VALE | BP Peninsula Express Service Station | Corner Barrenjoey Road and Darley Street East STREET | Service Station | Regulation under CLM Act not required | -33.67670799 | 151.3090068 |
| MONA VALE | BP Service Station Mona Vale | 1721 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.68043443 | 151.3023553 |
| MONA VALE | Taronga Place Mona Vale properties | Taronga PLACE | Other Petroleum | Contamination currently regulated under CLM Act | -33.67422848 | 151.3066972 |
| MOOBALL | Mooball General Store | 5913 Tweed Valley WAY | Service Station | Regulation under CLM Act not required | -28.44204594 | 153.4887648 |
| MOONBI | Caltex Moonbi Service Station | New England HIGHWAY | Service Station | Regulation under CLM Act not required | -31.02264369 | 151.069094 |
| MOORE PARK | Area 2, Moore Park | Driver AVENUE | Unclassified | Regulation under CLM Act not required | -33.89426868 | 151.2226839 |
| MOOREBANK | Caltex Service Station | 216 Newbridge ROAD | Service Station | Regulation under CLM Act not required | -33.92930835 | 150.9551469 |
| MOOREBANK | Joyce Foam Products | 5-9 Bridges ROAD | Chemical Industry | Regulation under CLM Act not required | -33.92596302 | 150.9335273 |
| MOOREBANK | ABB Australia Pty Ltd | (a) 1 Bapaume ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.94143741 | 150.9208754 |
| MOOREBANK | Caltex Service Station Moorebank | 2 Bridges ROAD | Service Station | Regulation under CLM Act not required | -33.92839682 | 150.9327012 |
| MOOREBANK | Former Concrete Recyclers property, Newbridge Road, Moorebank | Newbridge ROAD | Landfill | Regulation under CLM Act not required | -33.9390295 | 150.9653979 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MOOREBANK | Helles Park | Helles AVENUE | Landfill | Regulation under CLM Act not required | -33.93633126 | 150.9221424 |
| MOORLAND | Caltex Service Station | 99 Jericho ROAD | Service Station | Regulation under CLM Act not required | -31.79436622 | 152.6514849 |
| MOREE | Ampol Moree Fuel Depot (Site ID: 28838) - formerly Caltex Depot | 101 Gosport STREET | Other Petroleum | Under assessment | -29.47603684 | 149.8476728 |
| MOREE | Moree Airport Evaporation Pond | Newell HIGHWAY | Unclassified | Regulation under CLM Act not required | -29.50289837 | 149.8411301 |
| MOREE | Former Freedom Service Station Site Moree | 1 Dover STREET | Service Station | Contamination formerly regulated under the CLM Act | -29.4715814 | 149.8440279 |
| MOREE | Former Golden Fleece Depot | Gosport STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -29.47698315 | 149.8477108 |
| MOREE | Former Mobil Depot | Gosport STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -29.47764104 | 149.8478284 |
| MOREE | Former Shell Depot | Adelaide STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -29.47655335 | 149.8465698 |
| MOREE | Caltex Service Station Moree | 54 Alice STREET | Service Station | Contamination currently regulated under CLM Act | -29.47158492 | 149.8433182 |
| MOREE | Shell Coles Express Service Station | Corner Gwydir and Balo STREET | Service Station | Regulation under CLM Act not required | -29.46081826 | 149.8419975 |
| MOREE | BP Truckstop and Depot Moree | Newell Highway - 423 Frome STREET | Service Station | Regulation under CLM Act not required | -29.48223274 | 149.8463679 |
| MOREE | Sunnyside Road | Sunnyside ROAD | Unclassified | Regulation under CLM Act not required | -29.45652718 | 149.8226682 |
| MORISSET | Railcorp Station Masters Cottage | 24 Dora STREET | Unclassified | Regulation under CLM Act not required | -33.10849681 | 151.4880317 |
| MORISSET | Morisset High School | Bridge STREET | Unclassified | Regulation under CLM Act not required | -33.10475221 | 151.4866482 |
| MORISSET | Sanyog Holdings Pty Ltd | 57 Dora STREET | Service Station | Regulation under CLM Act not required | -33.10732744 | 151.4900584 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MORPETH | Telstra Cable Installation and RTA Bridge work | Northumberland STREET | Other Petroleum | Regulation under CLM Act not required | -32.72489729 | 151.6266795 |
| MORPETH | Former Service Station | Swan STREET | Service Station | Regulation under CLM Act not required | -32.72477413 | 151.6250642 |
| MORTLAKE | Former Petroleum Storage Site | 108-116 Tennyson ROAD | Other Petroleum | Regulation under CLM Act not required | -33.83979033 | 151.1064889 |
| MORTLAKE | Kendall Bay Sediments | Kendall BAY | Gasworks | Contamination currently regulated under CLM Act | -33.83905999 | 151.1120458 |
| MORTLAKE | Former AGL site | Tennyson ROAD | Gasworks | Contamination formerly regulated under the CLM Act | -33.84287407 | 151.1109313 |
| MORTLAKE | Majors Bay Redevelopment | 14-22 Hilly STREET | Other Industry | Regulation under CLM Act not required | -33.83954617 | 151.1054674 |
| MORUYA | Former Fuel Depot Moruya | 11 to 13 Ford STREET | Other Petroleum | Regulation under CLM Act not required | -35.9112243 | 150.0826475 |
| MORUYA | Caltex Service Station Moruya | 80-84 Campbell STREET | Service Station | Regulation under CLM Act not required | -35.91195596 | 150.0824213 |
| MORUYA | Caltex Service Station | 26 Campbell STREET | Service Station | Under assessment | -35.9104985 | 150.0711419 |
| MOSMAN | 7-Eleven Mosman | 162A Spit Road Corner Mitchell ROAD | Service Station | Regulation under CLM Act not required | -33.81747016 | 151.2433633 |
| MOSMAN | BP Service Station | 175 Ourimbah ROAD | Service Station | Regulation under CLM Act not required | -33.82106757 | 151.233291 |
| MOSMAN | BP Express Mosman | 175 Ourimbah ROAD | Service Station | Regulation under CLM Act not required | -33.82106459 | 151.2332921 |
| MOSMAN | 7-Eleven Service Station Mosman | 45 Spit ROAD | Service Station | Regulation under CLM Act not required | -33.82302718 | 151.2435627 |
| MOSMAN | Allan Border Oval | Myahgah ROAD | Landfill | Regulation under CLM Act not required | -33.82681534 | 151.2417712 |
| MOSMAN | 173 Avenue Road, MOSMAN NSW 2088 | 173 Avenue ROAD | Unclassified | Regulation under CLM Act not required | -33.830565 | 151.243523 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MOSS VALE | Woolworths Service Station Moss Vale | 609 Argyle STREET | Service Station | Regulation under CLM Act not required | -34.55409411 | 150.3609797 |
| MOSS VALE | Coles Express Service Station | 579 Argyle STREET | Service Station | Regulation under CLM Act not required | -34.55313422 | 150.364684 |
| MOSS VALE | Moss Vale Refuelling Facility | Lackey ROAD | Other Petroleum | Regulation under CLM Act not required | -34.54662421 | 150.3721525 |
| MOUNT ANNAN | Woolworths Caltex Mount Annan | 157 Narellan (Corner Smeaton Grange Road) ROAD | Service Station | Regulation under CLM Act not required | -34.04685527 | 150.7610434 |
| MOUNT ANNAN | Great Southern Railways Aqueduct | Off Narellan ROAD | Unclassified | Regulation under CLM Act not required | -34.07308479 | 150.7707436 |
| MOUNT COLAH | Caltex Service Station Mount Colah | 603 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.67034662 | 151.1151861 |
| MOUNT COLAH | Foxglove Oval | Foxglove ROAD | Landfill | Contamination currently regulated under CLM Act | -33.65829855 | 151.1229638 |
| MOUNT DRUITT | Caltex (former Mobil) Service Station, 17 Mount Street, Mount Druitt | 17 Mount STREET | Service Station | Regulation under CLM Act not required | -33.76567994 | 150.8244544 |
| MOUNT DRUITT | 7-Eleven Mount Druitt | Lot 6 Luxford ROAD | Other Petroleum | Regulation under CLM Act not required | -33.76483839 | 150.8254157 |
| MOUNT HUTTON | Woolworths Service Station | 46 Wilsons ROAD | Service Station | Regulation under CLM Act not required | -32.9836378 | 151.67309 |
| MOUNT PRITCHARD | 7-Eleven Service Station | 352 Elizabeth DRIVE | Service Station | Regulation under CLM Act not required | -33.90260656 | 150.8963326 |
| MOUNT THORLEY | Bulga Surface Operations | Broke ROAD | Other Industry | Regulation under CLM Act not required | -32.68325751 | 151.1206158 |
| MOUNT THORLEY | Lowes Petroleum (Former BP) Depot Mount Thorley | 74 Mount Thorley ROAD | Other Petroleum | Regulation under CLM Act not required | -32.62443074 | 151.1025122 |
| MOUNT VICTORIA | Former Mobil Service Station | 81 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.5889727 | 150.2511783 |
| MOUNT VICTORIA | Caltex Service Station | 36a Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.58436517 | 150.2465528 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MUDGEE | Caltex Service Station | 114-116 Church STREET | Service Station | Regulation under CLM Act not required | -32.59428029 | 149.5876199 |
| MUDGEE | Shell Coles Express Service Station | 47 Church STREET | Service Station | Regulation under CLM Act not required | -32.59347493 | 149.5884623 |
| MUDGEE | BP Service Station Mudgee | 77 Church STREET | Service Station | Regulation under CLM Act not required | -32.59545872 | 149.588123 |
| MUDGEE | Mobil Depot | 47 Douro STREET | Other Petroleum | Contamination currently regulated under CLM Act | -32.60023979 | 149.5823448 |
| MUDGEE | Mudgee Gasworks | Mortimer Street and Court STREET | Gasworks | Regulation under CLM Act not required | -32.59168859 | 149.5817705 |
| MUDGEE | Former Essential Energy Depot | 27-31 Inglis STREET | Other Industry | Regulation under CLM Act not required | -32.60076552 | 149.5858905 |
| MUDGEE | Former Caltex Depot Mudgee | cnr Nicholson Street & Atkinson STREET | Other Petroleum | Regulation under CLM Act not required | -32.60125298 | 149.5851398 |
| MULGRAVE | 7-Eleven (former Mobil) Service Station | Corner Windsor Road and Mulgrave ROAD | Service Station | Regulation under CLM Act not required | -33.61687781 | 150.8341809 |
| MULLUMBIMBY | Station Street, Mullumbimby NSW 2482 | Station STREET | Other Industry | Regulation under CLM Act not required | -28.55211357 | 153.5035218 |
| MULWALA | Mulwala ADI Explosives Factory | Bayly STREET | Other Industry | Regulation under CLM Act not required | -35.97572689 | 145.9809786 |
| MURWILLUMBAH | Murwillumbah Ambulance Depot | 27 Queen STREET | Other Petroleum | Regulation under CLM Act not required | -28.32552576 | 153.4000182 |
| MURWILLUMBAH SOUTH | Caltex Murwillumbah (formerly Puma) | 182 Tweed Valley WAY | Service Station | Contamination formerly regulated under the CLM Act | -28.3263681 | 153.4103824 |
| MURWILLUMBAH SOUTH | Former Norco Butter Factory (Eastern Portion) | 230 Tweed Valley WAY | Other Petroleum | Regulation under CLM Act not required | -28.32791359 | 153.4073052 |
| MUSWELLBROOK | Former Caltex Depot | 1 Lower William STREET | Other Petroleum | Regulation under CLM Act not required | -32.26614257 | 150.8865136 |
| MUSWELLBROOK | Vacant Rail Land | 27 Brook STREET | Unclassified | Regulation under CLM Act not required | -32.26346086 | 150.8873181 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| MUSWELLBROOK | United Branded (Former Mobil) Service Station Muswellbrook | 49-51 Maitland STREET | Service Station | Regulation under CLM Act not required | -32.27218162 | 150.8900206 |
| MUSWELLBROOK | Former Mobil Depot Muswellbrook | 43-51 Ford STREET | Other Petroleum | Regulation under CLM Act not required | -32.2599725 | 150.887573 |
| MUSWELLBROOK | Woolworths Petrol | 72 Brook STREET | Service Station | Regulation under CLM Act not required | -32.26325377 | 150.8905966 |
| MUSWELLBROOK | Caltex Muswellbrook Service Station | 84-86 Maitland STREET | Service Station | Regulation under CLM Act not required | -32.27793094 | 150.8980938 |
| MUSWELLBROOK | Former Gasworks | Corner Carl Street and Foley STREET | Gasworks | Regulation under CLM Act not required | -32.26672337 | 150.8935982 |
| MUSWELLBROOK | Bayswater Power Station | New England HIGHWAY | Other Industry | Regulation under CLM Act not required | -32.3954046 | 150.9502683 |
| MUSWELLBROOK | Former Industrial Site | Lot 89 Rathmore STREET | Other Industry | Regulation under CLM Act not required | -32.30544071 | 150.8823657 |
| MUSWELLBROOK | Caltex Service Station | 12-16 Sydney STREET | Service Station | Regulation under CLM Act not required | -32.26785559 | 150.8879601 |
| MUSWELLBROOK | Former Caltex Depot | 47-50 Victoria STREET | Service Station | Regulation under CLM Act not required | -32.26788823 | 150.8930609 |
| MUSWELLBROOK | Former Pit Top No. 1 Colliery Muswellbrook Coal | Corner Clendinning Street and Victoria STREET | Other Industry | Regulation under CLM Act not required | -32.27031992 | 150.9009981 |
| NABIAC | Caltex Service Station Nabiac | 3964 Wallanbah (Cnr Wallanbah Rd and Pacific Hwy) ROAD | Service Station | Regulation under CLM Act not required | -32.09864883 | 152.3754346 |
| NAMBUCCA HEADS | Former Mobil Service Station | 6 Bowra STREET | Service Station | Regulation under CLM Act not required | -30.64282127 | 153.0035884 |
| NAMBUCCA HEADS | Foxs Road Residential Sites | Foxs ROAD | Other Industry | Under assessment | -30.62704952 | 152.9782164 |
| NARELLAN | Caltex Service Station Narellan | 1 George Hunter DRIVE | Service Station | Regulation under CLM Act not required | -34.03963992 | 150.7432386 |
| NARELLAN | Former Landfill | 1 Elyard STREET | Landfill | Regulation under CLM Act not required | -34.043474 | 150.7393256 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| NAROOMA | Former Caltex - Narooma | 82 Princes HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -36.21711766 | 150.1279305 |
| NAROOMA | Narooma BP - 90 Campbell St, Narooma | 90 Campbell STREET | Service Station | Contamination formerly regulated under the CLM Act | -36.216338 | 150.130229 |
| NAROOMA | Narooma Service Station | 60 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -36.21617955 | 150.126261 |
| NARRABEEN | Caltex Service Station | 1509-1511 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.70455756 | 151.2969352 |
| NARRABEEN | Shell Coles Express Service Station | 1418 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.70013931 | 151.3002782 |
| NARRABEEN | Narrabeen Shotgun Range Sydney Academy of Sport | Wakehurst PARKWAY | Unclassified | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.72138423 | 151.2642798 |
| NARRABEEN | 7-Eleven Service Station | 1234 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.71958892 | 151.298272 |
| NARRABEEN | 7-Eleven Narrabeen North | 1501-1505 Pittwater Road, corner Gondola ROAD | Service Station | Regulation under CLM Act not required | -33.70749859 | 151.296351 |
| NARRABRI | Caltex Service Station | 13 Doyle STREET | Service Station | Regulation under CLM Act not required | -30.3239182 | 149.7843052 |
| NARRABRI | Lowes Petroleum (Former Mobil) Narrabri Depot | 3 Old Gunnedah ROAD | Other Petroleum | Regulation under CLM Act not required | -30.33473586 | 149.789587 |
| NARRABRI | Caltex Service Station | 31-35 Cooma ROAD | Service Station | Regulation under CLM Act not required | -30.33968576 | 149.7657241 |
| NARRABRI | Caltex Narrabri Service Station | 31 Dangar (Cnr Anne and Dangar) STREET | Service Station | Regulation under CLM Act not required | -30.32989667 | 149.7756598 |
| NARRABRI | Caltex Service Station | 12 Reid STREET | Other Petroleum | Regulation under CLM Act not required | -30.32282764 | 149.7901182 |
| NARRABRI | Cargill Soapstock Disposal Site | Westport ROAD | Unclassified | Contamination formerly regulated under the CLM Act | -30.4698458 | 149.6981931 |
| NARRABRI | Caltex Service Station | 7-13 James STREET | Service Station | Regulation under CLM Act not required | -30.33016168 | 149.7940732 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| NARRABRI | Narrabri Service Centre Pty Ltd | 11553 Newell HIGHWAY | Service Station | Regulation under CLM Act not required | -30.348381 | 149.756886 |
| NARRANDERA | Former Mobil Narrandera Depot | 24 Whitton STREET | Other Petroleum | Regulation under CLM Act not required | -34.7410523 | 146.5620667 |
| NARRANDERA | Former Mobil Emoleum Narrandera Depot | 5-7 Margaret STREET | Other Petroleum | Regulation under CLM Act not required | -34.74105391 | 146.5628144 |
| NARROMINE | Narromine Fuel (Former Caltex) Service Station | Cnr Burraway Street and Algalah STREET | Service Station | Regulation under CLM Act not required | -32.23565321 | 148.2454259 |
| NELLIGEN | Former Clay Target Shooting Range | 1398 Kings Highway and adjoining land on Old Bolaro Mountain ROAD | Unclassified | Contamination currently regulated under CLM Act | -35.64392469 | 150.0955224 |
| NELLIGEN | Lot 2 Old Bolaro Road | Old Bolaro ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -35.64485609 | 150.0937341 |
| NELSON BAY | Shell Coles Express Service Station | 25 Stockton STREET | Service Station | Regulation under CLM Act not required | -32.72265762 | 152.1437317 |
| NELSON BAY | Former Caltex Service Station Nelson Bay | 38 Stockton STREET | Service Station | Regulation under CLM Act not required | -32.72335662 | 152.1429384 |
| NEMINGHA | Caltex Service Station and Depot Nemingha | 428 Armidale (previously 16 New England Highway) ROAD | Service Station | Regulation under CLM Act not required | -31.12425169 | 150.9909054 |
| NEUTRAL BAY | Caltex Service Station | 16-38 Military ROAD | Service Station | Regulation under CLM Act not required | -33.82907162 | 151.2163342 |
| NEUTRAL BAY | Shell Coles Express Service Station | 200-204 Ben Boyd ROAD | Service Station | Regulation under CLM Act not required | -33.82915781 | 151.219437 |
| NEW LAMBTON | Caltex Service Station New Lambton | 144 Bridges ROAD | Service Station | Regulation under CLM Act not required | -32.93283668 | 151.7141748 |
| NEW LAMBTON | BP Service Station | 105 St James ROAD | Service Station | Regulation under CLM Act not required | -32.92910325 | 151.7155801 |
| NEW LAMBTON | 7-Eleven (former Mobil) Service Station | 291 Turton ROAD | Service Station | Regulation under CLM Act not required | -32.91773864 | 151.7243096 |
| NEWCASTLE | Wharf Road Newcastle Car Park | 313-317 Wharf ROAD | Unclassified | Regulation under CLM Act not required | -32.92570385 | 151.7744076 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| NEWCASTLE | Newcastle Foreshore | 40 Stevenson Place STREET | Other Industry | Regulation under CLM Act not required | -32.92556503 | 151.7876742 |
| NEWCASTLE | Reclaimed Land | 26-28 Honeysuckle DRIVE | Unclassified | Contamination formerly regulated under the CLM Act | -32.92604705 | 151.7649508 |
| NEWCASTLE | SRA Land | Scott STREET | Gasworks | Regulation under CLM Act not required | -32.92641425 | 151.7837817 |
| NEWCASTLE WEST | Former Mobil Service Station | 113 Parry STREET | Service Station | Regulation under CLM Act not required | -32.92560628 | 151.7558542 |
| NEWPORT | 7-Eleven (former Mobil) Service Station | 307 Barrenjoey ROAD | Service Station | Regulation under CLM Act not required | -33.65632902 | 151.3182089 |
| NEWPORT | Former Caltex Service Station Newport | 316-324 Barrenjoey ROAD | Service Station | Regulation under CLM Act not required | -33.65634516 | 151.3191571 |
| NEWTOWN | Caltex Service Station Newtown | 26 - 36 Enmore ROAD | Service Station | Regulation under CLM Act not required | -33.89851331 | 151.17714 |
| NEWTOWN | Aluminium Enterprises | 66 Brocks LANE | Metal Industry | Contamination was addressed via the planning process (EP&A Act) | -33.89467126 | 151.1847528 |
| NEWTOWN | Former Service Station | 81 Wilson STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.89626791 | 151.1827556 |
| NEWTOWN | Adjacent to Former Service Station | 79 Wilson STREET | Service Station | Contamination formerly regulated under the CLM Act | -33.89630155 | 151.1826567 |
| NORAVILLE | Former Toukley Landfill | Wilfred Barrett DRIVE | Landfill | Regulation under CLM Act not required | -33.27734185 | 151.5537784 |
| NORTH ALBURY | Caltex Service Station and Diesel Stop | 79 Union ROAD | Service Station | Regulation under CLM Act not required | -36.05496713 | 146.9487635 |
| NORTH BOAMBEE VALLEY | Caltex Service Station | Cnr Pacific Hwy & Halls ROAD | Service Station | Regulation under CLM Act not required | -30.30639482 | 153.1007996 |
| NORTH BONDI | Caltex Service Station North Bondi | 321 Old South Head ROAD | Service Station | Regulation under CLM Act not required | -33.88463526 | 151.268551 |
| NORTH NARRABEEN | 7-Eleven Service Station | 1501-1503 Pittwater ROAD | Service Station | Regulation under CLM Act not required | -33.70749859 | 151.296351 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| NORTH RICHMOND | Caltex Service Station | 50 Bells Line Of ROAD | Service Station | Regulation under CLM Act not required | -33.57991338 | 150.7202346 |
| NORTH ROCKS | 7-Eleven Service Station North Rocks | 340 North Rocks ROAD | Service Station | Regulation under CLM Act not required | -33.76895144 | 151.0305952 |
| NORTH RYDE | Blenheim Park | 68 Blenheim ROAD | Landfill | Under assessment | -33.795984 | 151.134905 |
| NORTH ST MARYS | BP Service Station | 76 Glossop STREET | Service Station | Regulation under CLM Act not required | -33.76020183 | 150.7818149 |
| NORTH ST MARYS | Mt Druitt Transmission Substation | 69 Kurrajong ROAD | Other Industry | Regulation being finalised | -33.76376093 | 150.7921691 |
| NORTH STRATHFIELD | Budget Service Station | 143 Concord ROAD | Service Station | Regulation under CLM Act not required | -33.85945248 | 151.0927853 |
| NORTH STRATHFIELD | Former Caltex Service Station | 92a Concord ROAD | Service Station | Regulation under CLM Act not required | -33.86244297 | 151.0932434 |
| NORTH SYDNEY | Iora Complex | 1 Kiara PLACE | Gasworks | Regulation under CLM Act not required | -33.843145 | 151.2161142 |
| NORTH SYDNEY | Neutral Bay Sediments | Adjacent to Sub Base Platypus, High STREET | Gasworks | Contamination formerly regulated under the CLM Act | -33.8417682 | 151.2158756 |
| NORTH SYDNEY | Sub Base Platypus (previously HMAS Platypus) | High STREET | Gasworks | Contamination formerly regulated under the CLM Act | -33.84325935 | 151.2170347 |
| NORTH WOLLONGONG | Former Mobil Depot | 122-126 Montague STREET | Other Petroleum | Regulation under CLM Act not required | -34.40988259 | 150.8939374 |
| NORTHMEAD | Former Prestige Plastics | 1C Redbank ROAD | Other Industry | Regulation under CLM Act not required | -33.79716925 | 150.989926 |
| NORTHMEAD | Coles Express Service Station Northmead | 197 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.77741733 | 151.0001719 |
| NORTHMEAD | Sydney Water Land | 51c Hammers ROAD | Landfill | Regulation under CLM Act not required | -33.7887535 | 150.9858088 |
| NORTHMEAD | Caltex Service Station | 98-100 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.78786563 | 150.9945909 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| NORTHMEAD | 7-Eleven Service Station Northmead | 56 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.79090731 | 150.9967332 |
| NOWRA | Former Gasworks Managers Residence | 24 Osborne STREET | Gasworks | Regulation under CLM Act not required | -34.8708875 | 150.5992586 |
| NOWRA | Fire Station | 69 Bridge ROAD | Gasworks | Regulation under CLM Act not required | -34.87081582 | 150.6004881 |
| NOWRA | Historically Filled Land | 70 Bridge ROAD | Unclassified | Regulation under CLM Act not required | -34.87081809 | 150.6013231 |
| NOWRA | Shell Coles Express Service Station | 55 Kinghorne STREET | Service Station | Regulation under CLM Act not required | -34.87633757 | 150.6023481 |
| NOWRA | Former gasworks | Lamonds LANE | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -34.87111182 | 150.6000803 |
| NOWRA | Former Hollingworth Scrap Yard | 72-74 Jervis and 117 East STREET | Other Industry | Regulation under CLM Act not required | -34.88324216 | 150.6034361 |
| NOWRA | Woolworths Service Station | 60 North Street STREET | Service Station | Regulation under CLM Act not required | -34.87266278 | 150.6014052 |
| NOWRA | Harry Sawkins Park | Bounded by Princes Hwy, Graham St & McGrath AVENUE | Gasworks | Regulation under CLM Act not required | -34.87093993 | 150.6037157 |
| NOWRA EAST | Mobil Service Station | Lot 3 Kalandar STREET | Service Station | Contamination formerly regulated under the CLM Act | -34.88850535 | 150.6093504 |
| NYNGAN | Caltex Service Station | 39-41 Pangee STREET | Service Station | Regulation under CLM Act not required | -31.56101006 | 147.1914997 |
| NYNGAN | Caltex Service Station | 126 Pangee STREET | Service Station | Regulation under CLM Act not required | -31.56482841 | 147.2002892 |
| NYNGAN | Main West Rail Line | Mitchell HIGHWAY | Other Industry | Regulation under CLM Act not required | -31.6411651 | 147.344176 |
| OAK FLATS | Shellharbour City Works Depot | 132 Industrial ROAD | Other Industry | Regulation under CLM Act not required | -34.56546013 | 150.8087225 |
| OBERON | Caltex Service Station and Depot | Lowes Mount ROAD | Service Station | Regulation under CLM Act not required | -33.69509055 | 149.8570553 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| OBERON | Oberon Timber Complex | Lowes Mount ROAD | Other Industry | Regulation under CLM Act not required | -33.69264862 | 149.8564588 |
| OBERON | Former Shell Depot | 32 O'Connell ROAD | Other Petroleum | Regulation under CLM Act not required | -33.6997172 | 149.8450057 |
| OBERON | CSR Ltd Property and King's Stockyard Creek | Off Endeavour STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.6922152 | 149.8686909 |
| OCEAN SHORES | Former Ocean Shores Service Station | Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -28.51270299 | 153.5301496 |
| OLD GUILDFORD | Caltex Service Station | 636-644 Woodville ROAD | Service Station | Regulation under CLM Act not required | -33.86670857 | 150.9879189 |
| OLD TOONGABBIE | Baulkham Hills Transmission Substation | 191z Old Windsor ROAD | Other Industry | Under assessment | -33.78166777 | 150.9689625 |
| ORANGE | Former Fuel Depot | 24-28 Peisley STREET | Other Petroleum | Contamination currently regulated under CLM Act | -33.29624293 | 149.1017277 |
| ORANGE | Caltex Orange Depot | 184 Byng STREET | Service Station | Regulation under CLM Act not required | -33.28285589 | 149.1050273 |
| ORANGE | Woolworths Orange Service Station | 357-361 Summer Street, corner William STREET | Service Station | Regulation under CLM Act not required | -33.28445811 | 149.1053604 |
| ORANGE | BP Orange Service Station (Reliance Petroleum) | 81 Summer STREET | Service Station | Regulation under CLM Act not required | -33.2825884 | 149.0951535 |
| ORANGE | BP-Branded Lowes Petroleum Depot | 197 - 201 Margaret STREET | Other Petroleum | Regulation under CLM Act not required | -33.27145977 | 149.1078103 |
| ORANGE | Caltex Summer Street Service Station Orange | 70-74 Summer Street, corner Hill STREET | Service Station | Regulation under CLM Act not required | -33.28311722 | 149.0940712 |
| ORANGE | Lowes Petroleum (BP-branded) Service Station | 76 Peisley STREET | Service Station | Regulation under CLM Act not required | -33.29025034 | 149.1027194 |
| ORANGE | Former Mobil Service Station | 24-28 Bathurst ROAD | Service Station | Regulation under CLM Act not required | -33.2866912 | 149.1066505 |
| ORANGE | BP (Reliance Petroleum) Service Station Orange | 56-60 Bathurst ROAD | Service Station | Regulation under CLM Act not required | -33.28980053 | 149.1086212 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ORANGE | Former Mobil Service Station | 168 Peisley STREET | Service Station | Regulation under CLM Act not required | -33.28525478 | 149.1037259 |
| ORANGE | 5-7 Edward St Orange | 5-7 Edward STREET | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.2991077 | 149.1034092 |
| ORANGE | Former Orange Gasworks (Now Ashcroft's IGA) | 216-238 Peisley STREET | Gasworks | Under assessment | -33.282969 | 149.104597 |
| ORANGE | United Orange (Woodward) Service Station | 174 Woodward STREET | Service Station | Under assessment | -33.280004 | 149.087196 |
| OURIMBAH | Palmdale Service Centre Pty Ltd | 3130 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.3381336 | 151.374586 |
| OURIMBAH | United Ourimbah | 51 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.36025941 | 151.3694483 |
| OURIMBAH | Shell Coles Express Service Station | 78-80 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.3468202 | 151.3710098 |
| OXLEY VALE | Hayes Transport Services | 10 Manilla ROAD | Other Petroleum | Regulation under CLM Act not required | -31.06991417 | 150.9101381 |
| OYSTER BAY | Shell Coles Express Service Station | 20 Carvers ROAD | Service Station | Contamination formerly regulated under the CLM Act | -34.00934475 | 151.0758626 |
| OYSTER COVE | Cove Marine Pty Ltd | 60 Frederick STREET | Unclassified | Contamination currently regulated under POEO Act | -32.73549959 | 151.952446 |
| PADDINGTON | 7-Eleven Service Station | 59 Oxford STREET | Service Station | Contamination currently regulated under CLM Act | -33.88322921 | 151.2205024 |
| PADDINGTON | Former Workshop | 52 Hopewell STREET | Other Industry | Regulation under CLM Act not required | -33.88195798 | 151.2220744 |
| PADSTOW | Caltex Padstow | 115 Fairford ROAD | Service Station | Regulation under CLM Act not required | -33.9434571 | 151.0345671 |
| PADSTOW | Selleys / Dulux | 1-29 Gow STREET | Chemical Industry | Regulation under CLM Act not required | -33.93904125 | 151.0381725 |
| PADSTOW | Former Exide Battery Manufacturing & Recycling | 55 Bryant STREET | Other Industry | Contamination currently regulated under CLM Act | -33.94265241 | 151.0378986 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PADSTOW | Galvatech | 49 Gow STREET | Metal Industry | Contamination currently regulated under POEO Act | -33.93808679 | 151.0346862 |
| PADSTOW | Foseco Australia | 7 Stuart STREET | Chemical Industry | Regulation under CLM Act not required | -33.94342957 | 151.0377316 |
| PADSTOW | Sebel Furniture | Parts 64 and 92 Gow STREET | Other Industry | Regulation under CLM Act not required | -33.93606752 | 151.0322057 |
| PAGEWOOD | Former Email Site | Corner of Page Street and Holloway STREET | Metal Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.94302462 | 151.2132036 |
| PAMBULA | Offsite area (roadways) adjacent to United Service Station Pambula (former Shell) | Corner Quondola Street and Bullara STREET | Service Station | Regulation under CLM Act not required | -36.93104481 | 149.8746763 |
| PARKES | Caltex Service Station Parkes | 352-360 Clarinda STREET | Service Station | Regulation under CLM Act not required | -33.13317454 | 148.173643 |
| PARKES | Former Caltex Parkes (Mugincoble) Depot - Eugowra Rd, Mugincoble | Eugowra ROAD | Service Station | Regulation under CLM Act not required | -33.19007031 | 148.224822 |
| PARKES | BP Truckstop | (Newell Highway) 1 Forbes ROAD | Other Petroleum | Regulation under CLM Act not required | -33.14309226 | 148.1710282 |
| PARKES | Former BP Telescope Service Station | 339-341 Clarinda STREET | Service Station | Regulation under CLM Act not required | -33.13216152 | 148.1743239 |
| PARKES | BP Reliance East End Service Station Parkes | 46 Clarinda STREET | Service Station | Regulation under CLM Act not required | -33.14243539 | 148.1846227 |
| PARKES | Former Parkes Gasworks (including Rail Corridor and offsite land) | 129 Woodward Street and land within the Parkes railway CORRIDOR | Gasworks | Contamination currently regulated under CLM Act | -33.14480316 | 148.1844397 |
| PARKLEA | Caltex Parklea Service Station | Old Windsor (north of Miami Street) ROAD | Service Station | Regulation under CLM Act not required | -33.72427108 | 150.9388531 |
| PARRAMATTA | BP Service Station | 435 Church STREET | Service Station | Regulation under CLM Act not required | -33.80498714 | 151.0056151 |
| PARRAMATTA | Coleman Oval Embankment | Cnr of Pitt STREET and Maquarie STREET | Unclassified | Regulation under CLM Act not required | -33.80441625 | 150.9954841 |
| PARRAMATTA | 7-Eleven (former Mobil) Service Station | 81 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.80919769 | 151.0142894 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PARRAMATTA | Parramatta Park Toilet Block Demolition | The Cresent Toilet Block Parramatta PARK | Unclassified | Regulation under CLM Act not required | -33.81054034 | 150.9961968 |
| PAUPONG | Former Timber Treatment Plant | Off Paupong ROAD | Other Industry | Regulation under CLM Act not required | -36.57657408 | 148.6624998 |
| PENDLE HILL | 7-Eleven Service Station | 217 Wentworth AVENUE | Service Station | Regulation under CLM Act not required | -33.8017814 | 150.9577994 |
| PENNANT HILLS | Shell Coles Express Pennant Hills West | 386 Pennant Hills ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.73928611 | 151.0679704 |
| PENRITH | Mirvac Industrial Site | 2101 Castlereagh ROAD | Other Industry | Regulation under CLM Act not required | -33.73497514 | 150.6954097 |
| PENRITH | 7-Eleven (former Mobil) Service Station | 212-222 Andrews ROAD | Service Station | Regulation under CLM Act not required | -33.73059678 | 150.6952571 |
| PENRITH | Lowes Petroleum (Former Mobil) Depot Penrith | 174 Coreen AVENUE | Other Petroleum | Regulation under CLM Act not required | -33.74484268 | 150.6980504 |
| PENRITH | Caltex Service Station | Castlereagh Rd Cnr Lugard STREET | Service Station | Regulation under CLM Act not required | -33.73426843 | 150.6933382 |
| PENRITH | BP Express Service Station | Corner Coreen Avenue and Castlereagh ROAD | Service Station | Regulation under CLM Act not required | -33.74385498 | 150.6925743 |
| PENRITH | 7-Eleven Service Station Penrith | 30 Henry STREET | Service Station | Regulation under CLM Act not required | -33.75408799 | 150.7045594 |
| PENRITH | Crane Enfield Metals | 2115-2131 Castlereagh ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -33.73734959 | 150.696442 |
| PENRITH | Caltex Penrith Service Station | 153 Coreen AVENUE | Service Station | Regulation under CLM Act not required | -33.74287244 | 150.6927071 |
| PENRITH | Jet 60 Dry Cleaners | Shop 3 134-138 Henry STREET | Unclassified | Regulation under CLM Act not required | -33.75231953 | 150.6964541 |
| PENRITH | Former Dry Cleaners | Shop 3, 134-138 Henry STREET | Other Industry | Regulation under CLM Act not required | -33.75231953 | 150.6964541 |
| PENSHURST | 7-Eleven Service Station | 612 Forest ROAD | Service Station | Regulation under CLM Act not required | -33.96153533 | 151.0793525 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PENSHURST | Caltex Service Station | 641 King Georges ROAD | Service Station | Regulation under CLM Act not required | -33.95985335 | 151.0891118 |
| PERISHER VALLEY | Perisher Centre Loading Dock | Kosciuszko ROAD | Other Petroleum | Regulation under CLM Act not required | -36.40392862 | 148.4111593 |
| PERISHER VALLEY | Perisher Ski Resort | Kosciuszko ROAD | Other Petroleum | Regulation under CLM Act not required | -36.41106374 | 148.4005469 |
| PETERSHAM | Fanny Durack Aquatic Centre | Station STREET | Unclassified | Regulation under CLM Act not required | -33.89194583 | 151.151824 |
| PETERSHAM | 7-Eleven Petersham | 8-10 Crystal STREET | Service Station | Regulation under CLM Act not required | -33.88867433 | 151.1585716 |
| PHEASANTS NEST | 7-Eleven Service Station | (Southbound) Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.28291571 | 150.6394606 |
| PHEASANTS NEST | 7-Eleven (former Mobil) Service Station | (Northbound) Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.28303112 | 150.6363145 |
| PICTON | Coles Express Picton | 93-99 Argyle STREET | Service Station | Regulation under CLM Act not required | -34.16844337 | 150.6114236 |
| PICTON | McDonalds | 69 -71 Argyle STREET | Service Station | Regulation under CLM Act not required | -34.16711877 | 150.6121524 |
| PICTON | Public Car Park | Corner Colden Street and Corbett Lane STREET | Other Petroleum | Regulation under CLM Act not required | -34.169588 | 150.613603 |
| PITT TOWN | Whites Water Service | 1 Canning PLACE | Other Industry | Regulation under CLM Act not required | -33.57418268 | 150.8811385 |
| PLUMPTON | Woolworths Service Station Plumpton (Plumpton Marketplace Shops) | 260 Jersey ROAD | Service Station | Regulation under CLM Act not required | -33.74478874 | 150.8369408 |
| POINT PIPER | 5 Wunulla Road Point Piper | 5 Wunulla ROAD | Other Industry | Regulation under CLM Act not required | -33.8683426 | 151.2532699 |
| PORT BOTANY | Vopak B | 20 Friendship ROAD | Chemical Industry | Regulation under CLM Act not required | -33.97946548 | 151.2121752 |
| PORT BOTANY | Vopak A | 49 Friendship ROAD | Chemical Industry | Regulation under CLM Act not required | -33.97426175 | 151.2206228 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PORT BOTANY | Terminals | 45 Friendship ROAD | Chemical Industry | Regulation under CLM Act not required | -33.97609287 | 151.2174402 |
| PORT BOTANY | Bunnerong Canal | Between Brotherson Dock and Bumborah Point ROAD | Unclassified | Regulation under CLM Act not required | -33.96798227 | 151.2230052 |
| PORT BOTANY | Bulk Liquids Berth UPSS, Port Botany | Charlotte ROAD | Other Petroleum | Regulation under CLM Act not required | -33.97386329 | 151.2120157 |
| PORT BOTANY | Port Operations Centre UPSS, Port Botany | Penrhyn ROAD | Other Petroleum | Regulation under CLM Act not required | -33.96803686 | 151.2205968 |
| PORT BOTANY | Port Botany Railway Corridors | Friendship ROAD | Other Industry | Regulation under CLM Act not required | -33.95467008 | 151.2178012 |
| PORT BOTANY | Smith Bros | 4 Bumborah Point ROAD | Other Petroleum | Regulation under CLM Act not required | -33.9681757 | 151.2239505 |
| PORT BOTANY | Vopak Terminals - Pipeline Corridor | 21 Fishburn ROAD | Other Industry | Regulation under CLM Act not required | -33.97946548 | 151.2121752 |
| PORT KEMBLA | Coates Hire Facility (Eastern Portion) | 1 Flinders STREET | Other Industry | Regulation under CLM Act not required | -34.47104817 | 150.89162 |
| PORT KEMBLA | Shell Port Kembla CVRO | 87-89 Flinders STREET | Other Petroleum | Regulation under CLM Act not required | -34.46964995 | 150.8953859 |
| PORT KEMBLA | Darcy Road Rail Sidings | Darcy ROAD | Other Industry | Regulation under CLM Act not required | -34.47792834 | 150.9105503 |
| PORT KEMBLA | Port Kembla Orica | Foreshore Road and Darcy ROAD | Other Industry | Contamination currently regulated under CLM Act | -34.47773583 | 150.9054545 |
| PORT KEMBLA | Port Kembla, Auszinc Metals and Alloys | Lot 2 Shellharbour ROAD | Metal Industry | Regulation under CLM Act not required | -34.49335414 | 150.8961205 |
| PORT KEMBLA | South Yard Rail Sidings | Lot 3 Old Port ROAD | Unclassified | Regulation under CLM Act not required | -34.47500551 | 150.8951759 |
| PORT KEMBLA | Port Kembla Copper Smelter | Military ROAD | Metal Industry | Contamination currently regulated under POEO Act | -34.4810006 | 150.9063426 |
| PORT KEMBLA | Caltex Service Station | 16 Flinders STREET | Service Station | Regulation under CLM Act not required | -34.47058088 | 150.8945864 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PORT KEMBLA | No 2 Steelworks | Five Islands ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -34.45965024 | 150.8844432 |
| PORT KEMBLA | Manildra Park | Flinders STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -34.46946878 | 150.8935731 |
| PORT KEMBLA | BHP Area 21 | Springhill ROAD | Metal Industry | Contamination formerly regulated under the CLM Act | -34.45243931 | 150.8676495 |
| PORT KEMBLA | Port Kembla Steelworks Recycling Area | Springhill ROAD | Unclassified | Regulation under CLM Act not required | -34.45271181 | 150.8677127 |
| PORT KEMBLA | Commonwealth Rolling Mills (CRM) | Old Port ROAD | Metal Industry | Regulation under CLM Act not required | -34.47476117 | 150.8974746 |
| PORT KEMBLA | Port Kembla, Former Electricity Commission Site | Old Port Road/Christie Drive ROAD | Other Industry | Regulation under CLM Act not required | -34.46899143 | 150.8982854 |
| PORT KEMBLA | Port Kembla Steelworks - Steelhaven | Five Islands ROAD | Other Industry | Regulation under CLM Act not required | -34.47605247 | 150.891144 |
| PORT KEMBLA | Port Kembla Steelworks - No.1 Works Site | Five Islands ROAD | Metal Industry | Regulation under CLM Act not required | -34.47386606 | 150.8794912 |
| PORT KEMBLA | Port Kembla Springhill Works | Springhill ROAD | Metal Industry | Regulation under CLM Act not required | -34.45574479 | 150.875052 |
| PORT KEMBLA | Metal Manufactures (MM Kembla) | 30 Gloucester BOULEVARD | Metal Industry | Contamination currently regulated under CLM Act | -34.48227206 | 150.9111203 |
| PORT MACQUARIE | Former Mobil Depot | 211 Lake ROAD | Other Petroleum | Regulation under CLM Act not required | -31.44688513 | 152.8864499 |
| PORT MACQUARIE | Caltex Service Station | 112-114 Gordon STREET | Service Station | Regulation under CLM Act not required | -31.43491709 | 152.9047618 |
| PORT MACQUARIE | Caltex Port Macquarie Service Station | 29 Lord STREET | Service Station | Regulation under CLM Act not required | -31.43326436 | 152.9169873 |
| PORT MACQUARIE | Coles Myer | 43 John Oxley DRIVE | Service Station | Regulation under CLM Act not required | -31.45741442 | 152.8739626 |
| PORT MACQUARIE | Air BP Avgas Facility | Oliver DRIVE | Other Petroleum | Regulation under CLM Act not required | -31.43227222 | 152.8681083 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PORT MACQUARIE | Former Mobil Service Station | Corner Oxley Highway and Major Innes DRIVE | Service Station | Regulation under CLM Act not required | -31.45738931 | 152.873956 |
| PORT MACQUARIE | Port Macquarie Council Depot | Koala STREET | Unclassified | Regulation under CLM Act not required | -31.45341586 | 152.9032764 |
| PORT MACQUARIE | Shell Coles Express Port Macquarie Service Station | 121 Gordon STREET | Service Station | Regulation under CLM Act not required | -31.4343131 | 152.9046869 |
| PORT MACQUARIE | Caltex Service Station | 92 Hastings River DRIVE | Service Station | Regulation under CLM Act not required | -31.42934052 | 152.8830188 |
| PORT MACQUARIE | Caltex Service Station | 12-14 Bolwarra ROAD | Service Station | Regulation under CLM Act not required | -31.45015286 | 152.8854769 |
| PORT MACQUARIE | Car park | 28 Hayward STREET | Other Industry | Regulation under CLM Act not required | -31.43385131 | 152.9072399 |
| PORTLAND | Ivanhoe Colliery | Pipers Flat ROAD | Other Industry | Regulation under CLM Act not required | -33.36595748 | 150.0099577 |
| PORTLAND | Mt Piper Power Station | 350 Boulder ROAD | Other Petroleum | Regulation under CLM Act not required | -33.35581541 | 150.0350801 |
| PRAIRIEWOOD | 7-Eleven (former Caltex) Service Station | 485-487 Smithfield ROAD | Service Station | Regulation under CLM Act not required | -33.87102509 | 150.9031383 |
| PRESTONS | Jalco Automotive Pty Ltd | 238 Hoxton Park ROAD | Unclassified | Regulation under CLM Act not required | -33.92820345 | 150.8928415 |
| PROSPECT | 7-Eleven (former Mobil) Service Station Prospect | 354 Flushcombe ROAD | Service Station | Regulation under CLM Act not required | -33.79541624 | 150.9049417 |
| PROSPECT | Pincott's Cottage, Gate C1 | Off Reservoir ROAD | Unclassified | Regulation under CLM Act not required | -33.81589773 | 150.9144343 |
| PROSPECT | Gatehouse, 544 Reservoir Road | 544 Reservoir ROAD | Unclassified | Regulation under CLM Act not required | -33.81026272 | 150.9160605 |
| PROSPECT | Cottage 3, William Lawson Drive | William Lawson DRIVE | Unclassified | Regulation under CLM Act not required | -33.81490331 | 150.9149885 |
| PUNCHBOWL | Former BP Service Station | 1375 Canterbury Road, corner Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.93170424 | 151.0537302 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| PUNCHBOWL | Punchbowl Laundry | 42-44 Belmore ROAD | Chemical Industry | Contamination currently regulated under CLM Act | -33.93582701 | 151.0562638 |
| PUNCHBOWL | Caltex Service Station Punchbowl | 1285-1289 Canterbury ROAD | Service Station | Regulation under CLM Act not required | -33.93146308 | 151.0596348 |
| PUTNEY | Putney Marina | 20 Waterview STREET | Other Industry | Regulation under CLM Act not required | -33.82608091 | 151.1003966 |
| PYMBLE | Caltex Service Station | 1089 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.74102977 | 151.1385257 |
| PYMBLE | Shell Coles Express Service Station | 21 Ryde ROAD | Service Station | Regulation under CLM Act not required | -33.75198512 | 151.1438115 |
| PYMBLE | Former 3M site | 950 Pacific HIGHWAY | Gasworks | Regulation under CLM Act not required | -33.75050288 | 151.1460578 |
| PYMBLE | Pymble West Dry Cleaners | 6 Philip MALL | Other Industry | Under preliminary investigation order | -33.76109009 | 151.1284329 |
| PYRMONT | Former Council Works Depot (Fig and Wattle Depot) | 14-26 Wattle STREET | Other Industry | Regulation under CLM Act not required | -33.8752655 | 151.1942645 |
| QUAKERS HILL | 7-Eleven (former Mobil) Service Station | 83 Lalor ROAD | Service Station | Regulation under CLM Act not required | -33.72759077 | 150.8966764 |
| QUAKERS HILL | BP Branded Parkway (Former Caltex) Service Station Quakers Hill | 450 Quakers Hill PARKWAY | Service Station | Regulation under CLM Act not required | -33.72998613 | 150.9023617 |
| QUEANBEYAN | Former Mobil Service Station | 153 Uriarra ROAD | Service Station | Regulation under CLM Act not required | -35.34425514 | 149.2148687 |
| QUEANBEYAN | Bill Lilley Automotive | 169 Crawford STREET | Service Station | Regulation under CLM Act not required | -35.35138121 | 149.232486 |
| QUEANBEYAN | Woolworths Queanbeyan Service Station | 196 Crawford (Cnr Morisset St) STREET | Service Station | Regulation under CLM Act not required | -35.35163055 | 149.2335759 |
| QUEANBEYAN | Caltex Queanbeyan Service Station | 88 Macquoid (also known as Bungendore Rd) STREET | Service Station | Regulation under CLM Act not required | -35.34930535 | 149.2438607 |
| QUEANBEYAN | Former Mobil Emoleum Depot | 109-111 High STREET | Other Petroleum | Regulation under CLM Act not required | -35.3396115 | 149.237556 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| QUEANBEYAN | Former Caltex Depot | 20-30 Railway STREET | Other Petroleum | Regulation under CLM Act not required | -35.34218326 | 149.2253753 |
| QUEANBEYAN | 95 Crawford St, Queanbeyan | 95 Crawford STREET | Chemical Industry | Under assessment | -35.34707 | 142.229088 |
| QUEANBEYAN | Ampol Queanbeyan - Former Fuel Depot (Site ID 22608) | 26 Railway STREET | Service Station | Under assessment | -35.341387 | 149.225907 |
| QUEANBEYAN EAST | BP-Branded Service Station Queanbeyan | 50 Yass ROAD | Service Station | Regulation under CLM Act not required | -35.34126641 | 149.2445103 |
| QUEANBEYAN WEST | Caltex Service Station | Lanyon Dr Cnr Mccrae St (1 Suraci Place) STREET | Service Station | Regulation under CLM Act not required | -35.36372923 | 149.2067531 |
| QUIRINDI | Former Mobil Depot Quirindi | 4-6 Cross STREET | Other Petroleum | Regulation under CLM Act not required | -31.49903355 | 150.681972 |
| QUIRINDI | Tamarang ServiCentre Quirindi | 113-117 Station (also known as 119-121 Nowland) STREET | Service Station | Regulation under CLM Act not required | -31.50179204 | 150.6814611 |
| QUIRINDI | Caltex Service Station, Quirindi | 199-201 George STREET | Service Station | Regulation under CLM Act not required | -31.5068778 | 150.6805874 |
| RAMSGATE | Shell Coles Express Service Station | Grand Parade cnr Ramsgate ROAD | Service Station | Regulation under CLM Act not required | -33.98537988 | 151.1471234 |
| RANDWICK | 7-Eleven Service Station | 126-130 Barker STREET | Service Station | Contamination currently regulated under CLM Act | -33.92096152 | 151.2355927 |
| RANDWICK | Caltex Service Station | 2 Alison ROAD | Service Station | Regulation under CLM Act not required | -33.9065752 | 151.2320697 |
| RANDWICK | Metro Petroleum | 345 Avoca STREET | Service Station | Regulation under CLM Act not required | -33.92544832 | 151.2396799 |
| RANDWICK | Service Station, Randwick | 33-37 Carrington ROAD | Service Station | Contamination currently regulated under CLM Act | -33.90655015 | 151.2525065 |
| RANDWICK | Newmarket Stage 3 | Young & Barker STREET | Other Industry | Under assessment | -33.921459 | 151.237982 |
| RATHMINES | Rathmine's Recreation Area | 1 Overhill ROAD | Other Industry | Under assessment | -33.921459 | 151.237982 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| RAVENSWORTH | Ravensworth Operations Narama Mine | Lemington ROAD | Other Industry | Regulation under CLM Act not required | -32.47115903 | 151.0359579 |
| RAVENSWORTH | Cumnock Colliery | Pikes Gully ROAD | Other Industry | Regulation under CLM Act not required | -32.40218281 | 150.9960082 |
| RAYMOND TERRACE | Shell Coles Express Raymond Terrace | 107 Adelaide (formerly Pacific Highway) STREET | Service Station | Regulation under CLM Act not required | -32.76110922 | 151.7492847 |
| RAYMOND TERRACE | Caltex Service Station Raymond Terrace | 136 Adelaide Street, corner Glenelg STREET | Service Station | Regulation under CLM Act not required | -32.76503842 | 151.7425264 |
| RAYMOND TERRACE | Former Motor Registry | 53 William STREET | Other Petroleum | Regulation under CLM Act not required | -32.76286473 | 151.7445839 |
| RAYMOND TERRACE | Raymond Terrace Wastewater Treatment Works | 22 Elizabeth AVENUE | Other Industry | Regulation under CLM Act not required | -32.7745339 | 151.7498871 |
| RAYMOND TERRACE | Former Service Station | 82 Benjamin Lee DRIVE | Service Station | Contamination currently regulated under CLM Act | -32.76079457 | 151.7738493 |
| RAZORBACK | Muscat Developments Pty Ltd | 115 Mount View CLOSE | Other Industry | Regulation under CLM Act not required | -34.15859952 | 150.6328008 |
| REDFERN | BP Service Station | 116 Regent STREET | Service Station | Regulation under CLM Act not required | -33.89367876 | 151.1995256 |
| REDFERN | Former Printing Works | 101a Marriott STREET | Other Industry | Regulation under CLM Act not required | -33.89512556 | 151.2113422 |
| REDFERN | BP-branded Jasbe Surry Hills | 411 Cleveland STREET | Service Station | Regulation under CLM Act not required | -33.89183974 | 151.2132466 |
| REDFERN | Surry Hills Shopping Village | 397-399 Cleveland & 2-38 Baptist STREET | Other Industry | Regulation under CLM Act not required | -33.89229521 | 151.2119397 |
| REVESBY | Dorf Clark Industries | 184-194 Milperra ROAD | Metal Industry | Regulation under CLM Act not required | -33.93387149 | 151.000553 |
| REVESBY | Thetis Pty Ltd - Bituminous Products | 33-35 Violet STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.93702092 | 151.0067896 |
| REVESBY | Mirotone Pty Ltd | 21 Marigold STREET | Chemical Industry | Contamination currently regulated under POEO Act | -33.93559608 | 151.0002207 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| REVESBY | Caltex Service Station Revesby | 181 The River ROAD | Service Station | Regulation under CLM Act not required | -33.95573605 | 151.0171779 |
| REVESBY | Commercial Premises | 40 Marigold STREET | Unclassified | Regulation under CLM Act not required | -33.936897 | 150.998204 |
| RHODES | Homebush Bay Sediments adjoining the former UCAL and Allied Feeds sites | Homebush BAY | Chemical Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.8263749 | 151.0839216 |
| RHODES | Former Glad factory site | 10-16 Marquet STREET | Chemical Industry | Regulation under CLM Act not required | -33.82884048 | 151.0848716 |
| RHODES | Former UCAL site | Walker STREET | Chemical Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82727505 | 151.0853195 |
| RHODES | Homebush Bay sediments adjoining former Berger Paint factory | Oulton AVENUE | Chemical Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.83535308 | 151.083238 |
| RHODES | Former Allied Feeds site | Walker STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.82465376 | 151.0870401 |
| RICHMOND | Caltex Richmond Service Station | 98 March (Cnr East Market St) STREET | Service Station | Regulation under CLM Act not required | -33.59937996 | 150.7514483 |
| RICHMOND | Western Sydney University | 2 College STREET | Unclassified | Regulation under CLM Act not required | -33.6192 | 150.755816 |
| RIVERSTONE | Axalta Coating Systems | 15-23 Melbourne ROAD | Other Industry | Regulation under CLM Act not required | -33.6636649 | 150.8557519 |
| RIVERSTONE | 7-Eleven Riverstone | 55 Garfield ROAD | Service Station | Regulation under CLM Act not required | -33.67802232 | 150.8635246 |
| RIVERSTONE | Woolworths Vineyard Service Station, Riverstone | 1 Woodland Street, corner of Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.65607641 | 150.8724067 |
| RIVERSTONE | Vacant Commercial Land | 88-94 Junction ROAD | Unclassified | Regulation under CLM Act not required | -33.66226398 | 150.8789967 |
| RIVERWOOD | 7-Eleven Riverwood | 30 Bonds ROAD | Service Station | Regulation under CLM Act not required | -33.9523701 | 151.0583887 |
| ROCKDALE | 7-Eleven (former Mobil) Service Station | 293 West Botany STREET | Service Station | Regulation under CLM Act not required | -33.94995672 | 151.1484667 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ROCKDALE | 7-Eleven Service Station | 99 Railway STREET | Service Station | Regulation under CLM Act not required | -33.95247322 | 151.1356785 |
| ROCKDALE | Lindsay St, Rockdale | 7 Lindsay STREET | Other Industry | Under assessment | -33.95900867 | 151.1436466 |
| ROCKDALE | Asphalt Netball Courts - Rockdale Womens Sportsfield | 310 West Botany STREET | Landfill | Regulation under CLM Act not required | -33.953777 | 151.149593 |
| ROOTY HILL | 7-Eleven (former Mobil) Service Station | 106 Rooty Hill Road South ROAD | Service Station | Regulation under CLM Act not required | -33.78036181 | 150.8501998 |
| ROOTY HILL | 7-Eleven (former Mobil) Service Station | 1042 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.78214955 | 150.8287656 |
| ROOTY HILL | Infrabuild NSW Pty Ltd (formerly OneSteel NSW Pty Ltd) | 22 Kellogg ROAD | Other Industry | Regulation under CLM Act not required | -33.76664143 | 150.8493465 |
| ROSE BAY | Caltex Rose Bay Service Station | 488 Old South Head ROAD | Service Station | Regulation under CLM Act not required | -33.87475145 | 151.2723847 |
| ROSE BAY | Rose Bay Budget Service station | 638-646 New South Head ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.87062149 | 151.2677617 |
| ROSEBERY | Autofoil P/L | 2 Mentmore AVENUE | Other Industry | Regulation under CLM Act not required | -33.91121318 | 151.2054882 |
| ROSEBERY | Former Industrial Site (Former Electroplating Facility) | 108 Dunning AVENUE | Other Industry | Regulation under CLM Act not required | -33.91630811 | 151.201557 |
| ROSEBERY | Caltex Rosebery Service Station | 321 Gardeners (Cnr Macquarie St) ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.92302898 | 151.2059541 |
| ROSEBERY | Rosebery Service Station | 395 Gardeners ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.92246784 | 151.2024589 |
| ROSEHILL | Former Akzo Nobel site | 4 Grand AVENUE | Chemical Industry | Contamination currently regulated under CLM Act | -33.82238826 | 151.0319264 |
| ROSEHILL | James Hardie Australia and former James Hardie lands | 8 and 10 Colquhoun Street and 5 Devon STREET | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82539019 | 151.0339466 |
| ROSEHILL | 2 Ritchie Street, Rosehill | 2 Ritchie  STREET | Unclassified | Contamination formerly regulated under the CLM Act | -33.82691192 | 151.0154948 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ROSEHILL | James Hardie Factory (former, western portion) | 181 James Ruse DRIVE | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.81605834 | 151.0238145 |
| ROSEHILL | Viva Clyde Western Area | Durham Street, Rosehill (Camellia Peninsula) STREET | Other Petroleum | Regulation under CLM Act not required | -33.824104 | 151.037338 |
| ROSELANDS | Roselands Shopping Centre | 24 Roseland AVENUE | Service Station | Regulation under CLM Act not required | -33.93499281 | 151.0691284 |
| ROSELANDS | Woolworths Caltex Petrol Service Station Roselands | 218 King Georges ROAD | Service Station | Regulation under CLM Act not required | -33.93303118 | 151.0735036 |
| ROSELANDS | 7-Eleven (former Mobil) Service Station | 91 Canary's ROAD | Service Station | Regulation under CLM Act not required | -33.93356078 | 151.0736274 |
| ROSEVILLE | Mobil Service Station | 2 Boundary STREET | Service Station | Regulation under CLM Act not required | -33.78769177 | 151.1796011 |
| ROSEVILLE CHASE | Coles Express Roseville Chase | 388 Eastern Valley WAY | Service Station | Regulation under CLM Act not required | -33.78337722 | 151.1973901 |
| ROZELLE | Caltex Service Station | 121 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.86252996 | 151.168497 |
| ROZELLE | 7-Eleven (former Mobil) Service Station | 178-180 (176-184) Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.8630268 | 151.1680857 |
| ROZELLE | Kennards Rozelle | 15-39 Wellington STREET | Other Petroleum | Regulation under CLM Act not required | -33.86176757 | 151.1686519 |
| ROZELLE | White Bay Power Station | Robert STREET | Other Industry | Regulation under CLM Act not required | -33.86674636 | 151.1772204 |
| ROZELLE | BP Service Station | Corner Darling Street and Thornton STREET | Service Station | Regulation under CLM Act not required | -33.8591647 | 151.1716591 |
| RUFUS RIVER | SA Water Depot - Rufus River | Old Wentworth STREET | Other Petroleum | Regulation under CLM Act not required | -34.04191512 | 141.2679475 |
| RUSHCUTTERS BAY | d'Albora Marinas | 1b New Beach ROAD | Other Industry | Contamination currently regulated under POEO Act | -33.87351297 | 151.2345082 |
| RUTHERFORD | Rutherford Transpacific | 11 Kyle STREET | Other Industry | Regulation under CLM Act not required | -32.71105203 | 151.500311 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| RUTHERFORD | Shell Coles Express Service Station Rutherford | 118 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -32.7208703 | 151.5394595 |
| RUTHERFORD | Caltex Service Station | 134-138 New England HIGHWAY | Service Station | Regulation under CLM Act not required | -32.7202589 | 151.5381526 |
| RUTHERFORD | Transpacific Industrial Services/Nationwide Oil Pty Ltd | 99 Kyle STREET | Chemical Industry | Regulation under CLM Act not required | -32.71262159 | 151.5013865 |
| RUTHERFORD | Former Anambah Landfill | Anambah ROAD | Landfill | Regulation being finalised | -32.70493978 | 151.512629 |
| RYDALMERE | Caltex Service Station | 309 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.81196193 | 151.0371185 |
| RYDALMERE | Mitsubishi Electric | 348 Victoria ROAD | Other Industry | Contamination currently regulated under CLM Act | -33.81040138 | 151.0392812 |
| RYDALMERE | BP Service Station | 265 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.8109483 | 151.0328101 |
| RYDALMERE | Hunter Douglas | Victoria ROAD | Chemical Industry | Regulation under CLM Act not required | -33.81009112 | 151.0384732 |
| RYDALMERE | Rheem Australia | 1 Alan STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.81545013 | 151.0295476 |
| RYDALMERE | United Petroleum (former 7-Eleven) Service Station Rydalmere | 262-272 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.81006724 | 151.032377 |
| RYDE | Shell Coles Express Ryde | 45 Lane Cove ROAD | Service Station | Regulation under CLM Act not required | -33.80726028 | 151.109981 |
| RYDE | Caltex Service Station | 110 Lane Cove ROAD | Service Station | Regulation under CLM Act not required | -33.80142973 | 151.1137925 |
| RYDE | 7-Eleven (former Mobil) Service Station | 326-328 Blaxland ROAD | Service Station | Regulation under CLM Act not required | -33.80242183 | 151.1004278 |
| RYDE | Ryde Bus Depot | 51 - 75 Buffalo ROAD | Other Petroleum | Regulation under CLM Act not required | -33.81679771 | 151.1225255 |
| SANCTUARY POINT | United Service Station, Sanctuary Point | 147 Larmer AVENUE | Service Station | Regulation under CLM Act not required | -35.09918861 | 150.6329537 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SANDGATE | Caltex Service Station Sandgate | 162 Maitland ROAD | Service Station | Regulation under CLM Act not required | -32.86501596 | 151.706161 |
| SANDGATE | North Limited Storage Handling facility | Maitland ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -32.86598453 | 151.7012866 |
| SANS SOUCI | 7-Eleven (Former Mobil) Service Station | 474 Rocky Point ROAD | Service Station | Regulation under CLM Act not required | -33.99088939 | 151.1333779 |
| SANS SOUCI | BP Sans Souci | 520 Rocky Point ROAD | Service Station | Contamination currently regulated under CLM Act | -33.99245122 | 151.1323571 |
| SANS SOUCI | Kendall Street Reserve | Lawson Street and Kendall STREET | Landfill | Regulation under CLM Act not required | -33.99966431 | 151.13005 |
| SANS SOUCI | Former Service Station | 542-544 Rocky Point ROAD | Service Station | Contamination was addressed via the planning process (EP&A Act) | -33.99376148 | 151.1316131 |
| SANS SOUCI | Former 7-Eleven Ramsgate | 368 Rocky Point ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.98615125 | 151.1359961 |
| SCHOFIELDS | Reserve 478, Grange Avenue, Schofields | Reserve 478, Grange AVENUE | Landfill | Regulation under CLM Act not required | -33.70228736 | 150.8518591 |
| SCONE | Shell Coles Express Service Station | 91- 93 Kelly STREET | Service Station | Contamination currently regulated under CLM Act | -32.04715941 | 150.8676346 |
| SCONE | BP Scone | 18-30 Kelly STREET | Unclassified | Regulation under CLM Act not required | -32.040555 | 150.865519 |
| SCONE | Scone Works Depot | 220 Susan STREET | Other Petroleum | Regulation under CLM Act not required | -32.04444892 | 150.879152 |
| SCONE | Mobil Scone Airport Elt | 8 Walter Pye AVENUE | Other Petroleum | Regulation under CLM Act not required | -32.03596733 | 150.8323698 |
| SCONE | BP - Former Depot | Scone St, Guernsey St & Susan STREET | Service Station | Contamination formerly regulated under the CLM Act | -32.04599284 | 150.8662046 |
| SCONE | BP Scone | 26 Kelly STREET | Service Station | Regulation under CLM Act not required | -32.04033034 | 150.86549 |
| SCONE | BP Scone Service Station | 58 Kelly STREET | Service Station | Contamination currently regulated under CLM Act | -32.0437827 | 150.8662754 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SEVEN HILLS | 7-Eleven (Former Mobil) Service Station Seven Hills | 151 Prospect HIGHWAY | Service Station | Regulation under CLM Act not required | -33.76894646 | 150.9427004 |
| SEVEN HILLS | Australia Post | 3 Powers ROAD | Unclassified | Regulation under CLM Act not required | -33.77434009 | 150.9395495 |
| SEVEN HILLS | Car Park (Former Brickworks / Warehouse) | 1 Powers ROAD | Other Industry | Regulation under CLM Act not required | -33.77387442 | 150.9379787 |
| SEVEN HILLS | BP-branded Jasbe Petroleum Service Station | 156 Prospect HIGHWAY | Service Station | Regulation under CLM Act not required | -33.76906502 | 150.9414821 |
| SEVEN HILLS | Caltex Service Station | 38 Abbott ROAD | Service Station | Regulation under CLM Act not required | -33.76692649 | 150.9548271 |
| SEVEN HILLS | Caltex Service Station Seven Hills | 105 Station ROAD | Service Station | Regulation under CLM Act not required | -33.77435881 | 150.9448733 |
| SEVEN HILLS | Former Australian Waste Oil Refineries Site | 27 Powers ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -33.77536127 | 150.9511122 |
| SHELLY BEACH | Former Shelly Beach Landfill | Oaks AVENUE | Landfill | Regulation under CLM Act not required | -33.36700551 | 151.4913631 |
| SHORTLAND | Former Astra Street Landfill | 2 (part) & 28 (part) Astra STREET | Landfill | Contamination currently regulated under CLM Act | -32.8689426 | 151.6974685 |
| SHORTLAND | Tuxford Park landfill | 10 King STREET | Landfill | Regulation under CLM Act not required | -32.87721139 | 151.6936837 |
| SHORTLAND | Former Lorna St landfill | 8/475 Sandgate ROAD | Landfill | Regulation under CLM Act not required | -32.87888726 | 151.7023245 |
| SHORTLAND | 7-Eleven (Former BP) Service Station | 298-302 Sandgate ROAD | Service Station | Regulation under CLM Act not required | -32.8861645 | 151.6953912 |
| SHORTLAND | Shortland Wastewater Treatment Works | Aden STREET | Other Industry | Regulation under CLM Act not required | -32.88228564 | 151.6819137 |
| SILVERWATER | Former Silverwater Landfill | Carnarvon ROAD | Landfill | Contamination currently regulated under CLM Act | -33.83506394 | 151.033214 |
| SILVERWATER | Vacant property | 103-105 Silverwater ROAD | Other Industry | Regulation under CLM Act not required | -33.83831374 | 151.0472576 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SILVERWATER | Storage Facility | 54-58 Derby STREET | Unclassified | Regulation under CLM Act not required | -33.83855869 | 151.0478649 |
| SILVERWATER | Former Printing Facility | 46-58 Derby STREET | Other Industry | Regulation under CLM Act not required | -33.83866058 | 151.0482675 |
| SILVERWATER | Silverwater Correctional Complex | Holker STREET | Landfill | Regulation under CLM Act not required | -33.83123611 | 151.0585298 |
| SILVERWATER | Vittoria | 141 Silverwater ROAD | Other Industry | Under assessment | -33.834303 | 151.048664 |
| SINGLETON | BP Service Station Singleton | 53 George (Cnr Macquarie St) STREET | Other Petroleum | Regulation under CLM Act not required | -32.56182325 | 151.1748054 |
| SINGLETON | Shell Coles Express Service Station | 69-73 George STREET | Service Station | Regulation under CLM Act not required | -32.56297156 | 151.1755215 |
| SINGLETON | Mobil Singleton Airport Elt | 74B Range ROAD | Other Petroleum | Regulation under CLM Act not required | -32.60270846 | 151.1944828 |
| SINGLETON | Singleton Gasworks | 55-57 John STREET | Gasworks | Contamination formerly regulated under the CLM Act | -32.56774715 | 151.1658188 |
| SINGLETON | Putty Saw Mill | (via Singleton) Putty ROAD | Other Industry | Contamination currently regulated under CLM Act | -32.99958725 | 150.7111684 |
| SINGLETON | NSW Mines Rescue Services - Singleton | 6 Lachlan AVENUE | Other Industry | Regulation under CLM Act not required | -32.54537821 | 151.156584 |
| SMITHFIELD | Caltex Smithfield | 16-18 Tait STREET | Service Station | Regulation under CLM Act not required | -33.84596441 | 150.9435497 |
| SMITHFIELD | Freestones | 1 Hume ROAD | Other Petroleum | Regulation under CLM Act not required | -33.83577694 | 150.9310112 |
| SMITHFIELD | Liquip International | 13 Hume ROAD | Other Industry | Regulation under CLM Act not required | -33.83802635 | 150.9319034 |
| SMITHFIELD | Coles Express (former Mobil) Service Station | 678 The Horsley Drive, corner Smithfield ROAD | Service Station | Regulation under CLM Act not required | -33.85376154 | 150.9400104 |
| SMITHFIELD | Former Landfill | Little STREET | Landfill | Contamination being managed via the planning process (EP&A Act) | -33.85025253 | 150.9411561 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SOUTH ALBURY | BP Border Service Station | Corner Ebden Street and Wodonga PLACE | Service Station | Contamination formerly regulated under the CLM Act | -36.08875942 | 146.9093882 |
| SOUTH BOWENFELS | Shell Coles Express Service Station | Lot 1 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.50589001 | 150.1238487 |
| SOUTH COOGEE | Caltex South Coogee Service Station | 169-173 Malabar ROAD | Service Station | Regulation under CLM Act not required | -33.93233184 | 151.2574377 |
| SOUTH GRAFTON | Shell Coles Express Service Station | 91 Bent STREET | Service Station | Regulation under CLM Act not required | -29.70605829 | 152.9400329 |
| SOUTH GRAFTON | Former United (former Mobil) Service Station | Corner Pacific Highway and Charles STREET | Service Station | Regulation under CLM Act not required | -29.70814828 | 152.9412928 |
| SOUTH GRAFTON | Former Caltex Service Station | 46-58 Schwinghammer STREET | Service Station | Regulation under CLM Act not required | -29.71149672 | 152.9453337 |
| SOUTH GRAFTON | Former Caltex Depot South Grafton | 72-82 Swallow ROAD | Other Petroleum | Regulation under CLM Act not required | -29.73168549 | 152.944024 |
| SOUTH GRAFTON | Caltex Service Station | Pacific Hwy Cnr Gwyder HIGHWAY | Service Station | Regulation under CLM Act not required | -29.70739015 | 152.9425508 |
| SOUTH GRANVILLE | Enhance Service Station South Granville | 2 Rawson ROAD | Service Station | Regulation under CLM Act not required | -33.86366193 | 151.0088768 |
| SOUTH KEMPSEY | Caltex Service Station | 52 Lachlan STREET | Service Station | Regulation under CLM Act not required | -31.09361084 | 152.8370796 |
| SOUTH LISMORE | North Coast Petroleum (Former Mobil) Depot Lismore | 19-21 Elliot ROAD | Other Petroleum | Regulation under CLM Act not required | -28.81212046 | 153.2661935 |
| SOUTH LISMORE | Former Mobil Service Station | 126 - 128 Union STREET | Service Station | Regulation under CLM Act not required | -28.81242175 | 153.267541 |
| SOUTH LISMORE | Caltex Service Station | 237 Union STREET | Service Station | Regulation under CLM Act not required | -28.82052708 | 153.2648111 |
| SOUTH LISMORE | Former Mobil Depot | 26-32 Phyllis STREET | Other Petroleum | Regulation under CLM Act not required | -28.81005206 | 153.2660073 |
| SOUTH MURWILLUMBAH | Former Caltex Depot | 39 Lundberg DRIVE | Service Station | Regulation under CLM Act not required | -28.332622 | 153.4212884 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SOUTH MURWILLUMBAH | Caltex Service Station | 1-7 Buchanan (Cnr Tweed Valley Way) STREET | Service Station | Regulation under CLM Act not required | -28.32687988 | 153.4093274 |
| SOUTH MURWILLUMBAH | Former Mobil Depot | 45 Wardrop STREET | Other Petroleum | Regulation under CLM Act not required | -28.33421395 | 153.3993772 |
| SOUTH MURWILLUMBAH | Part Lot 100, DP 865105 - 332 Railway Street, South Murwillumbah NSW 2484 | 332 Railway STREET | Other Industry | Regulation under CLM Act not required | -28.332395 | 153.402446 |
| SOUTH NOWRA | Caltex South Nowra | 100 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.90516081 | 150.6029621 |
| SOUTH PENRITH | 7-Eleven Service Station | 45 Aspen STREET | Service Station | Regulation under CLM Act not required | -33.77727694 | 150.7107228 |
| SOUTH TAMWORTH | Coles Express Tamworth | 251 - 253 Goonoo Goonoo ROAD | Service Station | Contamination currently regulated under CLM Act | -31.1118945 | 150.9228523 |
| SOUTH TAMWORTH | Caltex Service Station | 2 Kathleen Street, corner Kent STREET | Service Station | Regulation under CLM Act not required | -31.10361712 | 150.9186343 |
| SOUTH WENTWORTHVILLE | Aldi Stores Development | 331-339 Great Western HIGHWAY | Metal Industry | Regulation under CLM Act not required | -33.81605854 | 150.9697429 |
| SOUTH WENTWORTHVILLE | Caltex Service Station | 313 Great Western HIGHWAY | Service Station | Regulation under CLM Act not required | -33.81643692 | 150.9718802 |
| SOUTH WEST ROCKS | Former Trial Bay Caltex Depot | Phillip DRIVE | Other Petroleum | Under assessment | -30.89190078 | 153.0573056 |
| SOUTH WEST ROCKS | Former Shell Trial Bay Depot | Phillip DRIVE | Other Industry | Regulation under CLM Act not required | -30.89273836 | 153.0612772 |
| SOUTH WEST ROCKS | Residential area and Reserve opposite Former Caltex terminal | Phillip DRIVE | Other Petroleum | Regulation under CLM Act not required | -30.89172594 | 153.0573164 |
| SPRINGVALE | Springvale Colliery | Castlereagh HIGHWAY | Other Industry | Regulation under CLM Act not required | -33.40334736 | 150.1070462 |
| ST CLAIR | 7-Eleven (former Mobil) Service Station | 4 Endeavour AVENUE | Service Station | Regulation under CLM Act not required | -33.79430926 | 150.7885793 |
| ST IVES | 7-Eleven (former Mobil) St Ives Service Station | 157-159 Mona Vale Road, corner Putarri AVENUE | Service Station | Regulation under CLM Act not required | -33.73265301 | 151.1563899 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ST IVES | Caltex Service Station | 452 Mona Vale ROAD | Service Station | Regulation under CLM Act not required | -33.70752272 | 151.187545 |
| ST IVES | Caltex Service Station | 164 Mona Vale ROAD | Service Station | Regulation under CLM Act not required | -33.7307595 | 151.1570462 |
| ST IVES | Caltex Service Station St Ives | 363 Mona Vale ROAD | Service Station | Regulation under CLM Act not required | -33.7168971 | 151.1735263 |
| ST IVES | Shell Service Station | 179-181 Mona Vale ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.73124859 | 151.1575827 |
| ST LEONARDS | Telstra Data Centre | 4A Herbert STREET | Other Petroleum | Regulation under CLM Act not required | -33.81873741 | 151.1914222 |
| ST MARYS | Former Woolworths Service Station | 120-128 Forrester ROAD | Service Station | Regulation under CLM Act not required | -33.75525115 | 150.7752897 |
| ST MARYS | 7-Eleven (former Mobil) Service Station | 2 Christie STREET | Service Station | Regulation under CLM Act not required | -33.74790843 | 150.7767667 |
| ST MARYS | 7-Eleven (former Mobil) Service Station | 2 Wilson STREET | Service Station | Regulation under CLM Act not required | -33.77790415 | 150.771689 |
| ST MARYS | Solveco | 38 LINKS ROAD | Other Industry | Contamination currently regulated under CLM Act | -33.73875413 | 150.7716457 |
| ST MARYS | Integral Energy Mt Druitt Transmission Substation | 69 Kurrajong North ROAD | Other Industry | Regulation under CLM Act not required | -33.76376093 | 150.7921691 |
| ST MARYS | Caltex St Marys Service Station | Wordoo St Cnr Forrester ROAD | Service Station | Regulation under CLM Act not required | -33.75334263 | 150.7755489 |
| ST MARYS | Drum Recycler | Vallance STREET | Landfill | Under assessment | -33.85198 | 150.941152 |
| ST MARYS | Chemcolour Industries | 19-25 Anne STREET | Chemical Industry | Regulation under CLM Act not required | -33.75027071 | 150.7725397 |
| ST MARYS | Former Dry Cleaning Location | 1-7 Queen STREET | Other Industry | Under assessment | -33.76223376 | 150.774412 |
| ST MARYS | St Mary's Shopping Village | 10 Charles Hackett DRIVE | Other Industry | Regulation under CLM Act not required | -33.76647672 | 150.7710143 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ST MARYS | Sydney Metro - St Marys Tunnel Substratum Lot 4205 | Beneath 1-7 Queen STREET | Other Industry | Under assessment | -33.76223376 | 150.774412 |
| ST PETERS | Cooks River Rail Terminal | 20 Canal ROAD | Unclassified | Regulation under CLM Act not required | -33.91943986 | 151.1726689 |
| ST PETERS | Camdenville Park | May STREET | Other Industry | Regulation under CLM Act not required | -33.90911815 | 151.176951 |
| ST PETERS | BP Express Service Station | 2 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -33.90982281 | 151.1809936 |
| ST PETERS | Former Tidyburn Facility | 53 Barwon Park ROAD | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.9130091 | 151.1809912 |
| ST PETERS | Former Industrial Manufacturing Facility (Taubman's Paints) | 75 Mary STREET | Other Industry | Regulation under CLM Act not required | -33.91307297 | 151.1731383 |
| ST PETERS | Burrows Industrial Estate | 1-3 Burrows ROAD | Landfill | Regulation under CLM Act not required | -33.91814763 | 151.1789035 |
| ST PETERS | St Peters Interchange | St Peters INTERCHANGE | Landfill | Contamination currently regulated under CLM Act | -33.912071 | 151.177458 |
| STANMORE | 125 Corunna Road | 125 Corunna ROAD | Unclassified | Regulation under CLM Act not required | -33.88937382 | 151.1644589 |
| STOCKTON | Former Coroba Landfill | 310 Fullerton STREET | Landfill | Regulation under CLM Act not required | -32.89578751 | 151.7898857 |
| STRATHFIELD | 7-Eleven (former Mobil) Service Station | 577 Liverpool ROAD | Service Station | Regulation under CLM Act not required | -33.88736091 | 151.0743474 |
| STRATHFIELD SOUTH | Former Landfill Site | 7-9 Dunlop STREET | Landfill | Regulation under CLM Act not required | -33.89509698 | 151.0796751 |
| STRATHFIELD SOUTH | 7-23 Water Street, Strathfield South | 7-23 Water STREET | Landfill | Regulation under CLM Act not required | -33.895928 | 151.082037 |
| STROUD | Stroud Fuel Supplies (Former Caltex) Service Station | 1 Cowper STREET | Service Station | Regulation under CLM Act not required | -32.39092749 | 151.9563089 |
| SUFFOLK PARK | BP Service Station | 207-209 Broken Head ROAD | Service Station | Regulation under CLM Act not required | -28.68800088 | 153.6083821 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SUFFOLK PARK | Suffolk Park dip site | Cnr Broken Head Road & Beech DRIVE | Cattle Dip | Regulation under CLM Act not required | -28.6874242 | 153.6072824 |
| SUMMER HILL | Maurice Dry Cleaners | 150 Smith STREET | Other Industry | Under assessment | -33.89191012 | 151.1372942 |
| SURRY HILLS | Woolworths Petrol Surry Hills | 475 Cleveland STREET | Service Station | Regulation under CLM Act not required | -33.89223271 | 151.2161434 |
| SURRY HILLS | Former Legion Cabs (Trading) Cooperative | 81 & 81A (Formerly 69 - 81) Foveaux STREET | Service Station | Regulation under CLM Act not required | -33.88470082 | 151.2107944 |
| SURRY HILLS | Ausgrid Road Reserve | Mary STREET | Other Industry | Regulation under CLM Act not required | -33.88292195 | 151.2095176 |
| SUTHERLAND | United Service Station and Sutherland Reservoir | 1 to 3 Oxford STREET | Service Station | Contamination currently regulated under CLM Act | -34.029532 | 151.0579906 |
| SUTHERLAND | 7-Eleven Service Station | 693 Old Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.02976735 | 151.0588789 |
| SUTTON FOREST | Coles Express Sutton Forest West | Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -34.60808989 | 150.2250592 |
| SWANSEA | Caltex Service Station | 126 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.08811841 | 151.6381764 |
| SWANSEA | Swansea 1 - Wastewater Pumping Station | 137 and 137a Northcote AVENUE | Other Industry | Regulation under CLM Act not required | -33.09733813 | 151.6473669 |
| SYDENHAM | SRA Land | 117 Railway PARADE | Other Industry | Regulation under CLM Act not required | -33.91560723 | 151.1656846 |
| SYDENHAM | Sydenham XPT Maintenance Facility | Way STREET | Other Industry | Regulation under CLM Act not required | -33.91698468 | 151.1614089 |
| SYDNEY | Interpro House (OSP 46581) | 447 Kent STREET | Other Petroleum | Regulation under CLM Act not required | -33.87225413 | 151.204761 |
| SYDNEY | Eurostar Dry Cleaners | 100 Oxford STREET | Chemical Industry | Regulation under CLM Act not required | -33.8792987 | 151.2156647 |
| SYDNEY | Chifley Tower (basement fuel storage area) | 2 Chifley SQUARE | Other Petroleum | Regulation under CLM Act not required | -33.8659151 | 151.2117496 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| SYDNEY OLYMPIC PARK | RMS Western Precinct | 14A-14E and 16 Hill ROAD | Other Petroleum | Regulation under CLM Act not required | -33.82239777 | 151.0758664 |
| SYDNEY OLYMPIC PARK | Bicentennial Park | Bicentennial DRIVE | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.84456248 | 151.0788116 |
| SYDNEY OLYMPIC PARK | Former Golf Driving Range Landfill | Sarah Durack AVENUE | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.85358517 | 151.0713987 |
| SYDNEY OLYMPIC PARK | Kronos Hill Landfill | Kevin Coombes AVENUE | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.84014442 | 151.0649521 |
| SYDNEY OLYMPIC PARK | Wilson Park (Former oil gas plant site) | Newington ROAD | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82623982 | 151.0536833 |
| SYDNEY OLYMPIC PARK | Woo-la-ra Landfill | Hill ROAD | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82695807 | 151.07282 |
| SYDNEY OLYMPIC PARK | Aquatic Centre Carpark Landfill | Shane Gould AVENUE | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.85153457 | 151.0678127 |
| SYDNEY OLYMPIC PARK | Blaxland Common Landfill | Jamieson STREET | Landfill | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.82638382 | 151.05972 |
| SYDNEY OLYMPIC PARK | Haslams Creek South Area 3 | At Kronos Hill, Kevin Coombes AVENUE | Landfill | Contamination formerly regulated under the CLM Act | -33.84113059 | 151.0602966 |
| SYLVANIA | Caltex Service Station | 61 Port Hacking ROAD | Service Station | Regulation under CLM Act not required | -34.0140089 | 151.104212 |
| SYLVANIA HEIGHTS | Ampol Service Station (former Caltex) - Sylvania Heights | 414-416 Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -34.02361051 | 151.0895394 |
| TALBINGO | Old Town Landfill | Bridle STREET | Landfill | Regulation under CLM Act not required | -35.59018237 | 148.3041771 |
| TALBINGO | T3 Spoil dump and adjoining river sediments | Off Snowy Mountains HIGHWAY | Landfill | Contamination formerly regulated under the CLM Act | -35.6177268 | 148.2926158 |
| TALBINGO | Former grit blasting site | Old Damsite ROAD | Other Industry | Regulation under CLM Act not required | -35.60894551 | 148.3030165 |
| TALLAWANG | Rail Corridor at Tallawang | Whistons LANE | Other Industry | Under assessment | -32.211829 | 149.476697 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TAMINDA | Taminda Depots and Adjacent Areas | 27-29 Gunnedah ROAD | Other Petroleum | Regulation being finalised | -31.09642128 | 150.9058193 |
| TAMINDA | Mobil Depot | 9 Hinkler ROAD | Other Petroleum | Regulation under CLM Act not required | -31.09584286 | 150.9040493 |
| TAMINDA | Cleanaway Operations Pty Ltd | 31 Gunnedah ROAD | Other Industry | Regulation being finalised | -31.09621029 | 150.9051567 |
| TAMINDA | Cummins South Pacific Pty Ltd | 141 Gunnedah ROAD | Other Petroleum | Regulation under CLM Act not required | -32.211829 | 149.476697 |
| TAMWORTH | Caltex Tamworth Service Station | 109 Gunnedah ROAD | Service Station | Regulation under CLM Act not required | -31.09723226 | 150.8955299 |
| TAMWORTH | Curlew Crescent | 19-29 Curlew CRESCENT | Metal Industry | Regulation under CLM Act not required | -31.06963607 | 150.9069306 |
| TAMWORTH | Former Service Station, Fitzpatrick Super Fund, Tamworth | 210 Goonoo Goonoo ROAD | Service Station | Regulation under CLM Act not required | -31.10613594 | 150.9234143 |
| TAMWORTH | Elovera Former Sheep Dip | 730 Ascot Calala ROAD | Cattle Dip | Regulation under CLM Act not required | -31.1801846 | 150.962897 |
| TAMWORTH | Housing NSW | 29 -33 White STREET | Other Petroleum | Regulation under CLM Act not required | -31.0915651 | 150.9357811 |
| TAMWORTH | Former Mobil Service Station | 373-375 Armidale ROAD | Service Station | Regulation under CLM Act not required | -31.10122679 | 150.9441341 |
| TAMWORTH | Kensell's Mitsubishi | 11-14 Kable AVENUE | Other Petroleum | Regulation under CLM Act not required | -31.08921565 | 150.9273063 |
| TAMWORTH | Caltex Star Tamworth | 21 White STREET | Service Station | Regulation under CLM Act not required | -31.09255137 | 150.9341709 |
| TAMWORTH | Former Service Station Tamworth | (Cnr Scott Rd) 254-256 Goonoo Goonoo ROAD | Service Station | Regulation under CLM Act not required | -31.1118945 | 150.9228523 |
| TAMWORTH | Gunnedah Road Site | 49 GUNNEDAH ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -31.09574904 | 150.9021583 |
| TAMWORTH | Elgas Depot (former gasworks) | 115 Marius STREET | Gasworks | Regulation under CLM Act not required | -31.08546191 | 150.926437 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TAMWORTH | Proposed ALDI Store Tamworth | 194-196 Peel STREET | Other Industry | Regulation under CLM Act not required | -31.08522053 | 150.9260054 |
| TAMWORTH | BP Viaduct | 190 Peel STREET | Service Station | Under assessment | -32.211829 | 149.476697 |
| TANILBA BAY | 46 President Wilson Walk Tanilba Bay Service Station | 46 President Wilson WALK | Service Station | Under assessment | -32.733783 | 152.00166 |
| TANILBA BAY | 48 President Wilson Walk, Tanilba Bay | 48 President Wilson WALK | Service Station | Under assessment | -32.734212 | 152.001298 |
| TARAGO | Tarago Railway Siding | Goulburn STREET | Other Industry | Contamination currently regulated under CLM Act | -35.0695949 | 149.6516166 |
| TARAGO | Tarago former Station Masters Cottage | 106 Goulburn STREET | Other Industry | Contamination currently regulated under CLM Act | -35.06938653 | 149.6521178 |
| TARCUTTA | Mobil Service Station | (Hume Highway) 32 Sydney STREET | Service Station | Contamination formerly regulated under the CLM Act | -35.2772942 | 147.73574 |
| TAREE | Caltex Taree | 12 Pitt STREET | Service Station | Regulation under CLM Act not required | -31.90551738 | 152.4783334 |
| TAREE | Former Caltex Depot | 44 Stevenson STREET | Other Petroleum | Regulation under CLM Act not required | -31.90563595 | 152.4640848 |
| TAREE | Former BP Service Station (Reliance Petroleum) | 150 Manning River DRIVE | Service Station | Regulation under CLM Act not required | -31.93842026 | 152.4682056 |
| TAREE | Former Shell Depot | 53-55 Stevenson STREET | Other Petroleum | Regulation under CLM Act not required | -31.90514622 | 152.4649706 |
| TAREE | United Service Station and Former Mobil Depot | 85 Muldoon Street, corner Grey Gum ROAD | Service Station | Regulation under CLM Act not required | -31.89744109 | 152.4508569 |
| TAREE | Caltex Service Station | 104-106 Commerce STREET | Service Station | Regulation under CLM Act not required | -31.90720519 | 152.4500926 |
| TAREE | Footpath in front of the former BP service station | 53-55 Victoria STREET | Service Station | Regulation under CLM Act not required | -31.91015653 | 152.4659073 |
| TAREE | 20 Pitt Street, Taree | 20 Pitt STREET | Other Petroleum | Under assessment | -31.904015 | 152.482114 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TAREN POINT | Former Oyster Farm | Part 2R Alexander Avenue and part 98 Woodlands ROAD | Other Industry | Contamination was addressed via the planning process (EP&A Act) | -34.01714802 | 151.1252694 |
| TAREN POINT | Former Oyster Farmer | 1A Atkinson ROAD | Other Industry | Regulation under CLM Act not required | -34.02081803 | 151.1283282 |
| TAREN POINT | Former manufacturing site | 46-50 Bay ROAD | Other Industry | Regulation under CLM Act not required | -34.0236184 | 151.1231649 |
| TAREN POINT | Mangrove Lane Cycle pathway | Mangrove LANE | Unclassified | Regulation under CLM Act not required | -34.02404025 | 151.1324783 |
| TAREN POINT | Caltex Service Station | 114 Taren Point ROAD | Service Station | Regulation under CLM Act not required | -34.02065958 | 151.1218938 |
| TAREN POINT | Shell Coles Express Service Station | 99-103 Parraweena ROAD | Service Station | Regulation under CLM Act not required | -34.02630233 | 151.1200897 |
| TAREN POINT | Redevelopment Site | 25 Bay ROAD | Landfill | Regulation under CLM Act not required | -34.02119591 | 151.1274727 |
| TELARAH | Former Ausgrid Depot | Green STREET | Other Industry | Regulation under CLM Act not required | -32.7276446 | 151.5269745 |
| TELARAH | ACIRL | 5 Junction STREET | Other Industry | Regulation under CLM Act not required | -32.73457183 | 151.5400128 |
| TEMORA | Woolworths Caltex Temora | 98-100 Hoskins STREET | Service Station | Regulation under CLM Act not required | -34.44324584 | 147.5318667 |
| TEMORA | Former Temora Roundhouse | Corner Victoria and Camp STREET | Unclassified | Regulation under CLM Act not required | -34.45074538 | 147.5295383 |
| TEMPE | Tempe Depot | 1a Gannon STREET | Other Petroleum | Regulation under CLM Act not required | -33.92408255 | 151.1596469 |
| TEMPE | Caltex Service Station | 775 Princes HIGHWAY | Service Station | Contamination currently regulated under CLM Act | -33.9253681 | 151.1596532 |
| TEMPE | Former Tempe Tip | South STREET | Landfill | Contamination currently regulated under CLM Act | -33.92558642 | 151.1667178 |
| TEMPE | Railcorp Site Renwick Street | Renwick STREET | Other Industry | Regulation under CLM Act not required | -33.91997709 | 151.1576058 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TENTERFIELD | United Tenterfield Service Station | 94 Rouse STREET | Service Station | Regulation under CLM Act not required | -29.06260969 | 152.0168305 |
| TERALBA | Lake Macquarie Teralba Sanitary Depot | Griffen ROAD | Landfill | Regulation under CLM Act not required | -32.9372059 | 151.6214528 |
| TERALBA | Lucky's Scrap Metal Yard | 21 Racecourse ROAD | Metal Industry | Contamination currently regulated under CLM Act | -32.946854 | 151.617115 |
| TERANIA CREEK | Former Izzards Cattle Tick Dip | Wallace ROAD | Cattle Dip | Contamination formerly regulated under the CLM Act | -28.64999469 | 153.2788615 |
| TERREY HILLS | United Terrey Hills Service Station | 43 Booralie ROAD | Service Station | Under assessment | -33.680168 | 151.225029 |
| THE ENTRANCE NORTH | The Entrance North Beach (Crown Reserve) | 25CR Hargraves STREET | Landfill | Regulation under CLM Act not required | -33.33770829 | 151.5050033 |
| THE ROCKS | Dawes Point Park | Hickson ROAD | Other Industry | Regulation under CLM Act not required | -33.85518053 | 151.2089319 |
| THIRLMERE | Thirlmere Rail Heritage Museum | 10 Barbour ROAD | Other Industry | Regulation under CLM Act not required | -34.20689245 | 150.5693902 |
| THORNLEIGH | Caltex Thornleigh Service Station | 192-198 Pennant Hills (Cnr Duffy Ave) ROAD | Service Station | Regulation under CLM Act not required | -33.72660793 | 151.08364 |
| THORNLEIGH | Coles Express Service Station Thornleigh | 188 - 190 Pennant Hills ROAD | Service Station | Regulation under CLM Act not required | -33.72502184 | 151.0850569 |
| THORNTON | Energy Australia Thornton Pole Yard | 55 Weakleys DRIVE | Other Industry | Regulation under CLM Act not required | -32.79973875 | 151.6374998 |
| TIGHES HILL | Holcim Australia Cement Batching Plant | 340 Industrial DRIVE | Other Industry | Regulation under CLM Act not required | -32.90532418 | 151.7574857 |
| TIGHES HILL | SRA Land | 73 Elizabeth STREET | Unclassified | Regulation under CLM Act not required | -32.90795794 | 151.754631 |
| TIGHES HILL | Former Ampol Depot | 94 Elizabeth STREET | Other Petroleum | Regulation under CLM Act not required | -32.90658137 | 151.757239 |
| TIGHES HILL | Former Mobil Terminal | 110 Elizabeth STREET | Other Petroleum | Contamination formerly regulated under the CLM Act | -32.90600406 | 151.7586907 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TOCUMWAL | Former Mobil Depot | 250 Murray STREET | Other Petroleum | Regulation under CLM Act not required | -35.79180653 | 145.5648214 |
| TOCUMWAL | Former Mobil Depot | 79-83 Deniliquin ROAD | Other Petroleum | Regulation under CLM Act not required | -35.80914914 | 145.5585528 |
| TOCUMWAL | Murray Riverside Village | 193 Quicks ROAD | Other Petroleum | Under assessment | -35.847146 | 145.594931 |
| TOMAGO | Balcombe Sweat Furnace | 26 Laverick AVENUE | Metal Industry | Regulation under CLM Act not required | -32.82557395 | 151.7056416 |
| TOMAGO | Former Hydromet Site | 25 School DRIVE | Metal Industry | Under assessment | -32.8301553 | 151.7300603 |
| TOMAGO | RZM Site - Tomago | 1877 Pacific HIGHWAY | Other Industry | Regulation under CLM Act not required | -32.81419433 | 151.6985159 |
| TOMERONG | Log Cabin Service Station (United Petroleum) | D1300 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.01820959 | 150.5779687 |
| TOONGABBIE | 7-Eleven (Former Mobil) Service Station Toongabbie | 3 Metella ROAD | Service Station | Regulation under CLM Act not required | -33.78692357 | 150.9462837 |
| TOORMINA | Caltex Service Station | 2 Minorca PLACE | Service Station | Regulation under CLM Act not required | -30.35229568 | 153.0906606 |
| TORONTO | Coles XP (Former Mobil) Toronto Service Station | 133 - 137 Cary (Cnr Thorne St) STREET | Service Station | Regulation under CLM Act not required | -33.01187681 | 151.5930879 |
| TORONTO | BP Toronto Service Station | 132 Cary (Cnr Donnelly Ave) STREET | Service Station | Regulation under CLM Act not required | -33.01144673 | 151.5937863 |
| TORONTO | Toronto Hotel | 74 Victory PARADE | Unclassified | Regulation under CLM Act not required | -33.01214835 | 151.5958127 |
| TORONTO | Caltex Service Station | 147 Cary STREET | Service Station | Regulation under CLM Act not required | -33.01288007 | 151.5928388 |
| TORONTO | 155B Brighton Avenue, Toronto NSW 2283 | 155B Brighton AVENUE | Other Industry | Regulation under CLM Act not required | -33.0149011 | 151.5997613 |
| TOUKLEY | Former Shell Toukley Autoport | 211 Main ROAD | Service Station | Regulation under CLM Act not required | -33.26383791 | 151.5386268 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TOUKLEY | 7-Eleven Australia | 287 Main ROAD | Service Station | Regulation under CLM Act not required | -33.26469166 | 151.5462414 |
| TOUKLEY | 5-7 Main Road Toukley | 5-7 Main Road ROAD | Service Station | Regulation under CLM Act not required | -33.26277418 | 151.5226848 |
| TRANGIE | Caltex Service Station | (Mitchell Hwy) 76 Narromine STREET | Service Station | Regulation under CLM Act not required | -32.03234676 | 147.985164 |
| TUGGERAH | BP Tuggerah | 100 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.30578167 | 151.4198083 |
| TUMBARUMBA | Former Caltex Depot | 150 Albury STREET | Other Petroleum | Regulation under CLM Act not required | -35.77024081 | 147.9927182 |
| TUMBI UMBI | Former Tumbi Landfill | 140 Bellevue ROAD | Landfill | Regulation under CLM Act not required | -33.3993472 | 151.456471 |
| TUMBLONG | Tumblong - Fuller Residence | 46 Lewins LANE | Landfill | Under assessment | -35.164122 | 148.009593 |
| TUMUT | CSR Blue Dam | Jepsen AVENUE | Other Industry | Regulation under CLM Act not required | -35.30098337 | 148.1958308 |
| TUMUT | CSR Railway cutting | Jepsen AVENUE | Unclassified | Regulation under CLM Act not required | -35.30422002 | 148.1942579 |
| TUMUT | Former Telstra Depot | 22-26 Carey STREET | Other Industry | Regulation under CLM Act not required | -35.29873079 | 148.2191122 |
| TUNCESTER | Asbestos Waste Burial Site | 13 Rifle Range ROAD | Other Industry | Contamination currently regulated under CLM Act | -28.79939255 | 153.2193708 |
| TUROSS HEAD | Tern Inn Restaurant (abandoned UPSS) | 2 Trafalgar ROAD | Service Station | Regulation under CLM Act not required | -36.05871059 | 150.1308443 |
| TURRAMURRA | 7-Eleven (former Mobil) Service Station Turramurra | 1408 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.73326389 | 151.1264194 |
| TURRAMURRA | Woolworths Service Station | 1233 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.73317594 | 151.1313195 |
| TURRELLA | Tulloch Australia Pty Ltd | 61 Turrella STREET | Chemical Industry | Contamination currently regulated under CLM Act | -33.92857213 | 151.1475387 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| TWEED HEADS | Francis Street Road Reserve adjacent to 79-81 Wharf Street, Tweed Heads | 79-81 Wharf STREET | Other Petroleum | Regulation under CLM Act not required | -28.17351959 | 153.542262 |
| TWEED HEADS | Former Mobil Quix Service Station | 60 MINJUNGBAL DRIVE | Service Station | Contamination formerly regulated under the CLM Act | -28.20143775 | 153.5445381 |
| TWEED HEADS | Tweed Heads Slipway | 8 Terranora TERRACE | Other Industry | Under assessment | -28.18052246 | 153.5416407 |
| TWEED HEADS SOUTH | Former BP Depot | 142 Minjungbal DRIVE | Other Petroleum | Regulation under CLM Act not required | -28.20860702 | 153.5455932 |
| TWEED HEADS SOUTH | Coles Express Service Station | Corner Minjungbal Drive and Heffron STREET | Service Station | Regulation under CLM Act not required | -28.19459987 | 153.5419978 |
| TWEED HEADS SOUTH | Woolworths Plus Petrol | 98-102 Pacific (100 Minjungbal Drive) HIGHWAY | Service Station | Regulation under CLM Act not required | -28.20488521 | 153.5448675 |
| TWEED HEADS WEST | Caltex Service Station | 96 to 98 Kennedy DRIVE | Service Station | Regulation under CLM Act not required | -28.1871486 | 153.5229866 |
| TYAGARAH | Tyagarah Airstrip | 25 Staceys WAY | Other Petroleum | Regulation under CLM Act not required | -28.59511995 | 153.546834 |
| ULAN | Ulan Coal Mine | 4505 Ulan ROAD | Other Industry | Regulation under CLM Act not required | -32.25620603 | 149.7558075 |
| ULLADULLA | Coles Express Ulladulla | 153 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.36288274 | 150.47272 |
| ULLADULLA | Woolworths Petrol Station | 155-157 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.36316263 | 150.4725668 |
| ULLADULLA | Caltex Service Station | 62A Deering Street, corner Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -35.36276828 | 150.473578 |
| ULTIMO | Shell Coles Express Service Station | 387-429 Wattle STREET | Service Station | Regulation under CLM Act not required | -33.88138825 | 151.1966791 |
| UNANDERRA | Endeavour Energy Springhill Field Service Centre | 195 Five Island ROAD | Other Industry | Regulation under CLM Act not required | -34.45837706 | 150.8598825 |
| UNANDERRA | BlueScope Stainless Steel | 13 Marley PLACE | Metal Industry | Contamination currently regulated under CLM Act | -34.44959798 | 150.8571632 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| UNANDERRA | Unanderra Weekend Detention Centre | 34-40 Lady Penryhn DRIVE | Landfill | Regulation under CLM Act not required | -34.4620226 | 150.8473821 |
| UNANDERRA | Veolia Environmental Services | 9 Waynote PLACE | Other Industry | Regulation under CLM Act not required | -34.46042393 | 150.863232 |
| UNANDERRA | Caltex Service Station | 86-98 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.45414951 | 150.845165 |
| UNANDERRA | Former Prime Service Station and adjoining lands | 41-49 Princes HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -34.45056105 | 150.8490833 |
| UNANDERRA | DGL Environmental Pty Ltd | 201 Five Islands ROAD | Metal Industry | Contamination currently regulated under POEO Act | -34.45384578 | 150.8552253 |
| UNANDERRA | 7-Eleven Unanderra | 41-43 Princes HIGHWAY | Service Station | Regulation under CLM Act not required | -34.45056105 | 150.8490833 |
| UNANDERRA | 6 Marley Place, Unanderra NSW 2526 | 6 Marley PLACE | Other Industry | Regulation under CLM Act not required | -34.451825 | 150.853801 |
| URALLA | Caltex Service Station | 103 Bridge STREET | Service Station | Regulation under CLM Act not required | -30.64524911 | 151.4934484 |
| URALLA | Phoenix Foundry | 44 Duke STREET | Metal Industry | Regulation under CLM Act not required | -30.65093272 | 151.5004479 |
| URANQUINTY | Former Caltex Depot Kapooka (Wagga Wagga) | 6876 Olympic (Uranquinty Rd) HIGHWAY | Service Station | Regulation under CLM Act not required | -35.15319793 | 147.3085469 |
| URUNGA | Former Antimony Process plant | Hillside DRIVE | Chemical Industry | Contamination currently regulated under CLM Act | -30.50422942 | 153.0132011 |
| VALENTINE | BP Express Service Station | 855 Macquarie DRIVE | Service Station | Regulation under CLM Act not required | -33.00801109 | 151.6425806 |
| VALENTINE | Valentine Public School | Tallawalla ROAD | Unclassified | Regulation under CLM Act not required | -33.0091613 | 151.6423231 |
| VALLA | BP Nambucca Heads (Travel Centre and Truckstop) | 2 Corkwood ROAD | Other Industry | Regulation under CLM Act not required | -30.62648768 | 152.9727148 |
| VILLAWOOD | Former Toll Site | 110A Christina ROAD | Other Industry | Regulation under CLM Act not required | -33.87919117 | 150.9812193 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| VILLAWOOD | Former Defence Site | 29 Biloela STREET | Landfill | Regulation under CLM Act not required | -33.88782978 | 150.9886275 |
| VILLAWOOD | PPG Industries | 9 Birmingham AVENUE | Chemical Industry | Regulation under CLM Act not required | -33.87800757 | 150.9887929 |
| VILLAWOOD | Former Electrical Component Manufacturer | 66 Christina ROAD | Other Industry | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.88018315 | 150.9838773 |
| VILLAWOOD | Former Siemens/Westinghouse | 49 Miowera ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -33.87641909 | 150.9836746 |
| VILLAWOOD | Former Orica Crop Care (Lot 1 and 2 DP1258519) | 60 Christina and 2 Christina ROAD | Chemical Industry | Contamination formerly regulated under the CLM Act | -33.880329 | 150.9896329 |
| VILLAWOOD | Ettason Villawood Site | 2A Birmingham AVENUE | Chemical Industry | Regulation under CLM Act not required | -33.87877335 | 150.9827722 |
| VINEYARD | Shell Coles Express Service Station | 731 Windsor ROAD | Service Station | Regulation under CLM Act not required | -33.65780463 | 150.8753245 |
| WAGGA WAGGA | Caltex Service Station | 170 Fitzmaurice STREET | Service Station | Regulation under CLM Act not required | -35.10289587 | 147.3679002 |
| WAGGA WAGGA | Former BP Service Station | 31 Bourke STREET | Service Station | Regulation under CLM Act not required | -35.12626628 | 147.3547199 |
| WAGGA WAGGA | Caltex (former Mobil) Service Station | 106 Edward STREET | Service Station | Regulation under CLM Act not required | -35.11910909 | 147.3682364 |
| WAGGA WAGGA | Former Caltex Depot | 60 Lake Albert DRIVE | Service Station | Regulation under CLM Act not required | -35.12316794 | 147.37724 |
| WAGGA WAGGA | Former Mobil Depot Wagga Wagga | 97-99 Coleman STREET | Other Petroleum | Regulation under CLM Act not required | -35.12173871 | 147.3576651 |
| WAGGA WAGGA | Ashmont Autoport | Cnr Tobruk Street and Bardia STREET | Service Station | Regulation under CLM Act not required | -35.12517373 | 147.329919 |
| WAGGA WAGGA | Former Caltex Service Station | 343 Hammond AVENUE | Service Station | Regulation under CLM Act not required | -35.12420793 | 147.4157959 |
| WAGGA WAGGA | Caltex Service Station | 56 - 60 Docker St STREET | Service Station | Regulation under CLM Act not required | -35.11737947 | 147.3558145 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WAGGA WAGGA | Former Iron Foundry | 212-230 Hammond STREET | Metal Industry | Regulation under CLM Act not required | -35.12605478 | 147.4045461 |
| WAGGA WAGGA | Coles Express Wagga Wagga | 353-355 Edward STREET | Service Station | Regulation under CLM Act not required | -35.11606625 | 147.3509339 |
| WAGGA WAGGA | Former Wiradjuri landfill | Narrung STREET | Landfill | Regulation under CLM Act not required | -35.09628532 | 147.3619535 |
| WAGGA WAGGA | Former Gasworks | 54 Chaston STREET | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -35.12262069 | 147.3482778 |
| WAGGA WAGGA | Former Gasworks | Cnr Tarcutta Street and Cross STREET | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -35.10871183 | 147.3737933 |
| WAGGA WAGGA | BP Wagga Wagga | 180 Edward STREET | Service Station | Regulation under CLM Act not required | -35.11850802 | 147.3639619 |
| WAGGA WAGGA | Former Dry Cleaning Facility | 183 Fitzmaurice STREET | Other Industry | Contamination currently regulated under CLM Act | -35.10209987 | 147.3683852 |
| WAHROONGA | Coles Express Wahroonga | 1601 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.71945571 | 151.1163002 |
| WAHROONGA | 7-Eleven Service Station | 1579 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.71974617 | 151.1168106 |
| WAITARA | Caltex Service Station | 59-61 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.71064349 | 151.1024644 |
| WALGETT | Former Shell Depot | Castlereagh HIGHWAY | Other Petroleum | Regulation under CLM Act not required | -30.00861179 | 148.1239938 |
| WALLERAWANG | Wallerawang Power Station | 1 Main STREET | Other Petroleum | Regulation under CLM Act not required | -33.40339296 | 150.0855101 |
| WALLERAWANG | Lidsdale Coal Loading Facility | Main STREET | Other Industry | Regulation under CLM Act not required | -33.39996523 | 150.0737717 |
| WALLSEND | Caltex Maryland Service Station Wallsend | 41 Minmi ROAD | Service Station | Regulation under CLM Act not required | -32.88967866 | 151.6619253 |
| WALLSEND | Coles Express Wallsend East | 15 Thomas STREET | Service Station | Regulation under CLM Act not required | -32.90719444 | 151.6693426 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WALLSEND | OneSteel Recycling | 64-80 Sandgate ROAD | Metal Industry | Regulation under CLM Act not required | -32.89425477 | 151.6799648 |
| WALLSEND | Ausgrid Wallsend Depot | Abbott STREET | Other Industry | Regulation under CLM Act not required | -32.90162796 | 151.6857267 |
| WALLSEND | Cnr of Douglas Street and 111 Newcastle Road Wallsend | 111 Newcastle ROAD | Metal Industry | Regulation under CLM Act not required | -32.90416617 | 151.6832227 |
| WAMBERAL | Caltex Service Station | 654 The Entrance ROAD | Service Station | Regulation under CLM Act not required | -33.42338668 | 151.4375685 |
| WANGI WANGI | Myuna Colliery | Wangi Point ROAD | Other Industry | Regulation under CLM Act not required | -33.06139532 | 151.5697186 |
| WARATAH | Waratah Area Health | Turton ROAD | Unclassified | Regulation under CLM Act not required | -32.90961233 | 151.7260867 |
| WARATAH | Waratah former Gasworks | Turton and Georgetown ROADS | Gasworks | Contamination currently regulated under CLM Act | -32.90591166 | 151.7272715 |
| WARDELL | Nancy's Cattle Dip, Thurgates Lane, Wardell | Thurgates LANE | Cattle Dip | Regulation under CLM Act not required | -28.9540212 | 153.4274874 |
| WARILLA | Woolworths Petrol Warilla | 43 -57 Shellharbour ROAD | Service Station | Regulation under CLM Act not required | -34.5470966 | 150.863748 |
| WARKWORTH | Emulsion Plant, Dyno Nobel Asia Pacific Pty Ltd | 186 Long Point ROAD | Chemical Industry | Regulation under CLM Act not required | -32.5781708 | 151.0834387 |
| WARKWORTH | United Colliery | Jerrys Plains ROAD | Other Industry | Regulation under CLM Act not required | -32.5654356 | 150.9916698 |
| WARNERS BAY | Caltex Service Station | 55 King STREET | Service Station | Regulation under CLM Act not required | -32.97418806 | 151.6476184 |
| WARNERS BAY | 7-Eleven (former Mobil) Service Station | 393 Hillsborough ROAD | Service Station | Regulation under CLM Act not required | -32.9659363 | 151.6543264 |
| WARNERS BAY | Historically Filled Land | 41-43 Charles STREET | Unclassified | Regulation under CLM Act not required | -32.97340461 | 151.6464383 |
| WARNERVALE | Former Timber Treatment Plant | Aldenham and Railway ROADS | Other Industry | Contamination formerly regulated under the CLM Act | -33.24732018 | 151.4469037 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WARRAGAMBA | Warragamba Dam Viewing Platform | Eighteenth STREET | Unclassified | Regulation under CLM Act not required | -33.88545624 | 150.6016219 |
| WARRAGAMBA | Megarrity's Creek Site | Weir ROAD | Unclassified | Regulation under CLM Act not required | -33.8873146 | 150.5967305 |
| WARRAWONG | Caltex Service Station | 75-77 King STREET | Service Station | Regulation under CLM Act not required | -34.49037817 | 150.888802 |
| WARREN | Former Shell Depot | 8 Dubbo STREET | Other Petroleum | Regulation under CLM Act not required | -31.69379262 | 147.8308088 |
| WARREN | Caltex Warren Service Station | 1 Coonamble ROAD | Service Station | Regulation under CLM Act not required | -31.69508383 | 147.8405578 |
| WARREN | Former Mobil Warren Depot | 16 Dubbo STREET | Other Petroleum | Contamination currently regulated under CLM Act | -31.6943058 | 147.8314606 |
| WARWICK FARM | Warwick Farm Public School | 95 Lawrence Hargrave ROAD | Unclassified | Regulation under CLM Act not required | -33.90978695 | 150.9291852 |
| WATERLOO | Proposed Construction Site | 2 John STREET | Other Industry | Regulation under CLM Act not required | -33.89989686 | 151.2010324 |
| WATERLOO | Waverley Woollahra Process Plant | 355 Botany ROAD | Other Industry | Regulation under CLM Act not required | -33.9063092 | 151.2042672 |
| WATERLOO | Shell Coles Express Service Station | 867-877 South Dowling STREET | Service Station | Regulation under CLM Act not required | -33.90179774 | 151.2143789 |
| WATERLOO | Lawrence Dry Cleaners | 887-893 Bourke STREET | Unclassified | Contamination currently regulated under CLM Act | -33.89897433 | 151.2101436 |
| WATERLOO | Divercity Waterloo Blocks C & D and adjacent plaza / park | 1, 9, 13, 13A, 13B and 23 Archibald Avenue, 20 Dunkerley Place and 850 Bourke STREET | Other Industry | Regulation under CLM Act not required | -33.90200158 | 151.2098496 |
| WATERLOO | Iconic (Former Chubb Factory) Waterloo | 830-838 Elizabeth STREET | Other Industry | Regulation under CLM Act not required | -33.90227718 | 151.2060305 |
| WATERLOO | 22-24 Archibald Avenue | 22-24 Archibald AVENUE | Other Petroleum | Regulation under CLM Act not required | -33.90206938 | 151.2139293 |
| WAUCHOPE | Expressway Spares UST | 3 Sancrox ROAD | Other Petroleum | Regulation under CLM Act not required | -31.44163879 | 152.8231104 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WAUCHOPE | Former Shell Depot | 56-64 High STREET | Other Petroleum | Regulation under CLM Act not required | -31.45804845 | 152.7314151 |
| WAUCHOPE | Wauchope Service Station | 57 High STREET | Service Station | Regulation under CLM Act not required | -31.45737022 | 152.7305018 |
| WAUCHOPE | Former Timber Treatment Site | Blackbutt DRIVE | Other Industry | Regulation under CLM Act not required | -31.46575645 | 152.7228555 |
| WAUCHOPE | Shell Coles Express Service Station | 64 High STREET | Service Station | Regulation under CLM Act not required | -31.45764495 | 152.7315975 |
| WAUCHOPE | Wauchope Public Primary School | 2 Waugh STREET | Unclassified | Regulation under CLM Act not required | -31.45602953 | 152.7295059 |
| WAVERTON | Berry's Bay Woodley's Marina | 1 Balls Head DRIVE | Other Industry | Contamination formerly regulated under the POEO Act | -33.84441851 | 151.1947433 |
| WAVERTON | Oyster Cove AGL | 2 King STREET | Gasworks | Ongoing maintenance required to manage residual contamination (CLM Act) | -33.83637995 | 151.193541 |
| WAVERTON | SRA Land | 95 Bay ROAD | Unclassified | Contamination formerly regulated under the CLM Act | -33.83716728 | 151.1969497 |
| WEE JASPER | Wee Jasper Tavern | 6499 Wee Jasper ROAD | Other Industry | Regulation under CLM Act not required | -35.10992483 | 148.679428 |
| WELLINGTON | Former Caltex Service Station | 124-128 Lee STREET | Service Station | Regulation under CLM Act not required | -32.55082729 | 148.9411537 |
| WELLINGTON | BP Wellington Service Station | 35A Maxwell STREET | Service Station | Regulation under CLM Act not required | -32.55835121 | 148.9447284 |
| WELLINGTON | Woolworths Petrol Wellington | 79 Lee STREET | Service Station | Regulation under CLM Act not required | -32.54874227 | 148.9408531 |
| WELLINGTON | The Wash Shed (Laundromat) | 67 Gobolion STREET | Gasworks | Under assessment | -32.545654 | 148.944005 |
| WELLINGTON | Police Citizens Youth Club (PCYC) | 69 Gobolion STREET | Gasworks | Under assessment | -32.545654 | 148.944005 |
| WELLINGTON | J&J Mechanical | 1 Warrawee STREET | Gasworks | Under assessment | -32.545829 | 148.943352 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WELLINGTON | Wellington - Sherwood Residence | 69 Swift STREET | Other Industry | Under assessment | -32.554324 | 148.947452 |
| WENTWORTH | Caltex - Wentworth | 110 Adams STREET | Service Station | Regulation under CLM Act not required | -34.1024927 | 141.9160539 |
| WENTWORTH FALLS | Bodington Hospital | Bodington DRIVE | Unclassified | Contamination formerly regulated under the CLM Act | -33.73204611 | 150.3874554 |
| WENTWORTH POINT | RMS Eastern Precinct | 3-7 Burroway ROAD | Other Petroleum | Regulation under CLM Act not required | -33.8233882 | 151.0815668 |
| WENTWORTH POINT | Former TNT Express | 23 Bennelong PARKWAY | Other Petroleum | Regulation under CLM Act not required | -33.83115118 | 151.0726636 |
| WENTWORTHVILLE | Former Workshop | 2 Rawson Rd and 8 Barfil CRESCENT | Unclassified | Regulation under CLM Act not required | -33.81568808 | 150.9671853 |
| WERRINGTON | Caltex Service Station | Cnr Dunheved Rd and Henry Lawson DRIVE | Service Station | Regulation under CLM Act not required | -33.74577725 | 150.7409877 |
| WERRINGTON | Claremont Meadows Former landfill | Gipps STREET | Landfill | Regulation under CLM Act not required | -33.77341076 | 150.7557628 |
| WERRINGTON COUNTY | 7-Eleven Werrington | Lot 122 Dunheved ROAD | Service Station | Regulation under CLM Act not required | -33.74699408 | 150.7428609 |
| WEST BALLINA | Caltex Big Prawn Service Station | Pacific HIGHWAY | Service Station | Contamination formerly regulated under the CLM Act | -28.86374913 | 153.5321482 |
| WEST GOSFORD | Caltex Service Station | 283 Manns ROAD | Service Station | Regulation under CLM Act not required | -33.41659727 | 151.325219 |
| WEST GOSFORD | Caltex Service Station | 69-71 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.42729985 | 151.3214621 |
| WEST GOSFORD | Caltex Service Station | 30a Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.42778813 | 151.3190581 |
| WEST GOSFORD | Adcock Memorial Park | Central Coast HIGHWAY | Landfill | Contamination currently regulated under CLM Act | -33.42963075 | 151.3273331 |
| WEST NOWRA | Endeavour Energy Nowra Field Service Centre | 20 Depot ROAD | Other Industry | Regulation under CLM Act not required | -34.88993085 | 150.5878854 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WEST PENNANT HILLS | 7-Eleven (former Mobil) Service Station | 552 Pennant Hills ROAD | Service Station | Regulation under CLM Act not required | -33.74686545 | 151.0508067 |
| WEST RYDE | 7-Eleven (former Mobil) Service Station | 917 Victoria ROAD | Service Station | Regulation under CLM Act not required | -33.80921103 | 151.0932917 |
| WEST RYDE | Pfizer Australia Pty Ltd | 38-42 Wharf ROAD | Chemical Industry | Regulation under CLM Act not required | -33.81021085 | 151.0693631 |
| WEST RYDE | Reckitt Benckiser | 44 Wharf ROAD | Chemical Industry | Regulation under CLM Act not required | -33.81172205 | 151.0692752 |
| WEST RYDE | JHM Property Development | 2A Mellor STREET | Other Industry | Regulation under CLM Act not required | -33.81207534 | 151.094598 |
| WEST TAMWORTH | Woolworths Petrol | 119 Bridge STREET | Service Station | Regulation under CLM Act not required | -31.09358262 | 150.9167693 |
| WEST WALLSEND | West Wallsend Cemetery | 6 Cemetery ROAD | Unclassified | Regulation under CLM Act not required | -32.9025615 | 151.5701278 |
| WEST WYALONG | Lowes Petroleum (Former BP) Depot West Wyalong | Compton (formerly known as Town Bypass/Railway Road) ROAD | Other Petroleum | Regulation under CLM Act not required | -33.93440247 | 147.2154596 |
| WEST WYALONG | Caltex Depot | (Wyalong By-pass Rd) Lot 1-3 Showground ROAD | Service Station | Regulation under CLM Act not required | -33.92580863 | 147.1978504 |
| WEST WYALONG | Former Mobil Depot | 104 Compton ROAD | Other Petroleum | Regulation under CLM Act not required | -33.93449194 | 147.2147948 |
| WESTON | Illegal Dumping Site | Corner Kline Street & First STREET | Unclassified | Regulation under CLM Act not required | -32.81367986 | 151.4551507 |
| WETHERILL PARK | Former Fuel Storage Depot | 200-212 Cowpasture ROAD | Other Petroleum | Regulation under CLM Act not required | -33.84568871 | 150.8764012 |
| WETHERILL PARK | Sims Wetherill Park | 35-37 Frank STREET | Metal Industry | Regulation under CLM Act not required | -33.84056122 | 150.9086265 |
| WETHERILL PARK | Shell Coles Express Service Station | 565 Polding STREET | Service Station | Regulation under CLM Act not required | -33.8569731 | 150.8992804 |
| WETHERILL PARK | Cleanaway (Formerly Nationwide Oil) Wetherill Park | 6 Davis ROAD | Other Industry | Regulation under CLM Act not required | -33.83770038 | 150.9045197 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WETHERILL PARK | BOC Sydney Operations Centre | 428-440 Victoria STREET | Chemical Industry | Regulation being finalised | -33.84375988 | 150.8960027 |
| WETHERILL PARK | Camide Former Landfill | Newton ROAD | Landfill | Regulation under CLM Act not required | -33.83898879 | 150.8963813 |
| WETHERILL PARK | Fairfield Sustainable Resource Centre | Corner Hassall Street and Widemere ROAD | Other Industry | Under assessment | -33.83860329 | 150.9170013 |
| WICKHAM | Caltex Terminal and "Building 33" on offsite adjacent land | 156 Hannell Street and 33 Annie STREET | Other Petroleum | Contamination currently regulated under CLM Act | -32.9153413 | 151.7560062 |
| WICKHAM | Former Warehouse | 10 Dangar STREET | Unclassified | Regulation under CLM Act not required | -32.92383206 | 151.759761 |
| WICKHAM | Former Factory | 57 Annie STREET | Other Industry | Regulation under CLM Act not required | -32.91524827 | 151.7539893 |
| WICKHAM | Railcorp Wickham | 50 Railway STREET | Other Industry | Regulation under CLM Act not required | -32.9210433 | 151.7544687 |
| WICKHAM | Fuchs Lubricants Wickham | 2 Holland STREET | Other Industry | Contamination currently regulated under CLM Act | -32.9214709 | 151.7556928 |
| WILBERFORCE | Former Solvent Recycling Site | 13 Box AVENUE | Chemical Industry | Regulation under CLM Act not required | -33.54557427 | 150.8577006 |
| WILBERFORCE | Former Drum Reconditioners | 12-14 Box AVENUE | Other Industry | Contamination formerly regulated under the CLM Act | -33.5453884 | 150.8587934 |
| WILEY PARK | Sydney Water Property | 1B Hillcrest STREET | Other Industry | Regulation under CLM Act not required | -33.92391634 | 151.0676256 |
| WILLIAMTOWN | Hunter Land Effluent Pond | 38 Cabbage Tree ROAD | Other Industry | Regulation under CLM Act not required | -32.80750069 | 151.8310107 |
| WILLOUGHBY | Shell Coles Express Service Station | 616-626 Willoughby ROAD | Service Station | Regulation under CLM Act not required | -33.80593769 | 151.1988559 |
| WILLOUGHBY | Caltex Service Station | 157 Penhur STREET | Service Station | Regulation under CLM Act not required | -33.79793513 | 151.1981926 |
| WILLOUGHBY | BP Willoughby Express Tower | 498 Willoughby STREET | Service Station | Regulation under CLM Act not required | -33.81022918 | 151.199315 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WILLOUGHBY | Bicentennial Reserve Former Landfill, Willoughby | Small STREET | Other Industry | Contamination currently regulated under CLM Act | -33.81271251 | 151.203433 |
| WILLOUGHBY EAST | Willoughby Bus Depot | Corner Ann Street and Stan STREET | Other Industry | Regulation under CLM Act not required | -33.7982569 | 151.2038993 |
| WILTON | Condell Park Homestead | (Part Lot 17 DP 270536) Condell Park ROAD | Unclassified | Regulation under CLM Act not required | -34.21910141 | 150.6837962 |
| WINDANG | Caltex Service Station | 244-248 Windang ROAD | Service Station | Regulation under CLM Act not required | -34.5274434 | 150.8691161 |
| WINDSOR | Former Caltex Service Station | 46-52 Macquarie STREET | Service Station | Regulation under CLM Act not required | -33.60783315 | 150.8213428 |
| WINDSOR | Former Caltex Windsor Depot and Service Station | 48-50 Mileham STREET | Service Station | Regulation under CLM Act not required | -33.61538627 | 150.8157517 |
| WINDSOR | Woolworths (former Caltex) Service Station | Cnr Macquarie Street & Baker STREET | Service Station | Regulation under CLM Act not required | -33.60569346 | 150.8232803 |
| WINDSOR | Former Windsor Fire Station | 19 Fitzgerald STREET | Other Industry | Regulation under CLM Act not required | -33.6064873 | 150.8199089 |
| WINDSOR | Windsor Zone Substation | 56-60 Macquarie STREET | Other Industry | Regulation under CLM Act not required | -33.60812428 | 150.8208856 |
| WINGHAM | Former Caltex Service Station | 1036-1038 Wingham ROAD | Service Station | Regulation under CLM Act not required | -31.86236594 | 152.3805752 |
| WINGHAM | Bogas Service Station | Cnr Primrose Street and Isabella STREET | Service Station | Regulation under CLM Act not required | -31.86833656 | 152.3716346 |
| WINMALEE | Prime Winmalee Service Station | 281 Hawkesbury ROAD | Service Station | Regulation under CLM Act not required | -33.68223276 | 150.5997203 |
| WIRLINGA | Former Liquid Waste Disposal Facility | 704 Riverina ROAD | Unclassified | Regulation under CLM Act not required | -36.07103958 | 147.0193522 |
| WOLLI CREEK | Former Ausgrid Substation 10061 | 13 Gertrude STREET | Other Industry | Regulation under CLM Act not required | -33.93364031 | 151.1543818 |
| WOLLONGONG | Redevelopment site | 33 - 39 Beatson STREET | Other Petroleum | Regulation under CLM Act not required | -34.43196083 | 150.8976661 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WOLLONGONG | Metro Petroleum | 394 - 396 Crown STREET | Service Station | Under assessment | -34.425736 | 150.877619 |
| WOLLONGONG | Caltex Service Station | 9 Flinders STREET | Service Station | Regulation under CLM Act not required | -34.41505616 | 150.8932515 |
| WOLLONGONG | Greenhouse Park | Springhill ROAD | Landfill | Contamination currently regulated under CLM Act | -34.44119949 | 150.8931764 |
| WOLLONGONG | Former Wollongong Gasworks | 120 and 122 Smith STREET | Gasworks | Regulation under CLM Act not required | -34.42030173 | 150.8906745 |
| WOLLONGONG | Wollongong Harbour Central Spur | Off Endeavour DRIVE | Other Petroleum | Regulation under CLM Act not required | -34.42066879 | 150.906821 |
| WOLLONGONG | Woolworths Service Station | 425 Crown STREET | Service Station | Contamination formerly regulated under the CLM Act | -34.42637378 | 150.8799288 |
| WOLLONGONG | Commercial Premises | 76-78 Auburn STREET | Other Industry | Regulation under CLM Act not required | -34.43211799 | 150.8881031 |
| WOODBURN | Caltex Service Station | 129 River STREET | Service Station | Regulation under CLM Act not required | -29.07206887 | 153.3409769 |
| WOODBURN | Crown Reserve 88037 Woodburn | Pacific HIGHWAY | Landfill | Regulation under CLM Act not required | -29.06580577 | 153.3541886 |
| WOOLGOOLGA | Caltex Woolgoolga Service Station | 16 Bosworth ROAD | Service Station | Regulation under CLM Act not required | -30.12569561 | 153.1946006 |
| WOOLGOOLGA | United Petroleum Service Station(1868 Solitary Islands Way) | 56 Clarence STREET | Service Station | Contamination currently regulated under CLM Act | -30.11045544 | 153.1904609 |
| WOOLLAHRA | Former Service Station | 20 Wallis STREET | Service Station | Regulation under CLM Act not required | -33.8901965 | 151.2372752 |
| WOOLLAHRA | Proposed Jewish Care Centre | 7-21 Saber STREET | Unclassified | Regulation under CLM Act not required | -33.8904055 | 151.2480062 |
| WOOLLAHRA | Caltex Woollahra Service Station | 116 Old South Head ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.88959697 | 151.2553736 |
| WOOLLOOMOOLOO | Former BP Service Station | 2 Dowley STREET | Service Station | Contamination being managed via the planning process (EP&A Act) | -33.86940191 | 151.2218741 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WOOLOMIN | Woolomin Gold Rush Store | 65 Nundle ROAD | Other Petroleum | Contamination formerly regulated under the CLM Act | -31.30415134 | 151.149729 |
| WOOLOOWARE | Caltex Service Station | 100 Woolooware ROAD | Service Station | Regulation under CLM Act not required | -34.05274635 | 151.1408413 |
| WOOLOOWARE | Oyster Farm | Captain Cook DRIVE | Other Industry | Regulation under CLM Act not required | -34.03807914 | 151.1476055 |
| WOONGARRAH | Former Warnervale Landfill | 236-264 Hakone ROAD | Landfill | Regulation under CLM Act not required | -33.2376313 | 151.464362 |
| WOOTTON | Former Chemical Spill Site | 11859 Pacific HIGHWAY | Chemical Industry | Regulation under CLM Act not required | -32.28168548 | 152.3117819 |
| WOY WOY | Barry Robertson Holden | 231 Blackwall ROAD | Service Station | Regulation under CLM Act not required | -33.49621068 | 151.3285128 |
| WOY WOY | Bogas Service Station | 66 Memorial AVENUE | Service Station | Contamination currently regulated under CLM Act | -33.5069738 | 151.3315579 |
| WOY WOY | Mobil Former Woy Woy Service Station and adjacent land | 177-181 Blackwall ROAD | Service Station | Contamination formerly regulated under the CLM Act | -33.49257884 | 151.3273559 |
| WOY WOY | Rogers Park | Dunban ROAD | Landfill | Regulation under CLM Act not required | -33.50009693 | 151.3181347 |
| WOY WOY | Austin Butler Memorial Oval | Blackwall ROAD | Landfill | Regulation under CLM Act not required | -33.48672201 | 151.3283032 |
| WOY WOY | James Browne Oval | Welcome STREET | Landfill | Regulation under CLM Act not required | -33.49720596 | 151.3242986 |
| WOY WOY | 7-Eleven Service Station | Corner Rawson and Ocean Beach ROADS | Service Station | Regulation under CLM Act not required | -33.49379351 | 151.3201639 |
| WYALONG | Caltex Service Station | 50 Neeld (Newell Highway) STREET | Service Station | Regulation under CLM Act not required | -33.92665025 | 147.2446546 |
| WYOMING | Caltex Service Station Wyoming | 465 Pacific HIGHWAY | Service Station | Regulation under CLM Act not required | -33.40945391 | 151.3499812 |
| WYONG | Wyong Bayer/Kemcon | 16 Lucca ROAD | Chemical Industry | Contamination currently regulated under POEO Act | -33.26192339 | 151.4429446 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| WYONG | Caltex Service Station | M1 Pacific (Northbound) MOTORWAY | Service Station | Regulation under CLM Act not required | -33.25641477 | 151.4024821 |
| WYONG | Caltex Service Station | M1 Pacific (Southbound) MOTORWAY | Service Station | Regulation under CLM Act not required | -33.25330747 | 151.4053862 |
| WYONG | IXOM Facility | 8 Pavitt CRESCENT | Other Industry | Regulation under CLM Act not required | -33.26379108 | 151.4485113 |
| YAGOONA | Galserv Galvanising Services | 117-153 Rookwood ROAD | Metal Industry | Contamination currently regulated under POEO Act | -33.89493085 | 151.0388013 |
| YAGOONA | BP Service Station Potts Hill (Yagoona) | 155 Rookwood ROAD | Service Station | Regulation under CLM Act not required | -33.89330525 | 151.0390969 |
| YAGOONA | 7-Eleven (former Mobil) Service Station | 519 Hume HIGHWAY | Service Station | Regulation under CLM Act not required | -33.90760623 | 151.0207783 |
| YAGOONA | Shell Coles Express Service Station | 112 Rookwood ROAD | Service Station | Regulation under CLM Act not required | -33.89856213 | 151.0370458 |
| YAGOONA | Sydney Water Corporation Potts Hill Complex | 91 Brunker ROAD | Other Industry | Regulation under CLM Act not required | -33.89887589 | 151.0289165 |
| YALLAH | Tallawarra Power Station site | Princes HIGHWAY | Unclassified | Ongoing maintenance required to manage residual contamination (CLM Act) | -34.52412143 | 150.8062159 |
| YAMBA | Caltex Service Station | 22 Treelands DRIVE | Service Station | Regulation under CLM Act not required | -29.42701701 | 153.3279204 |
| YANCO | Former Service Station | 14 Main AVENUE | Service Station | Contamination formerly regulated under the CLM Act | -34.60356494 | 146.4105016 |
| YASS | Caltex Service Station | 228 Comur STREET | Service Station | Regulation under CLM Act not required | -34.84440036 | 148.9140179 |
| YASS | Caltex Service Station | 1715 Yass Valley WAY | Service Station | Regulation under CLM Act not required | -34.80708856 | 148.8824228 |
| YASS | Former Mobil Depot Yass and adjacent land | 54-58 Laidlaw STREET | Service Station | Ongoing maintenance required to manage residual contamination (CLM Act) | -34.83226934 | 148.9069512 |
| YASS | Former Gasworks | Dutton STREET | Gasworks | Contamination currently regulated under CLM Act | -34.83982614 | 148.9060029 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| YASS | Transgrid Depot Yass | 2 Perry STREET | Unclassified | Under assessment | -34.86238341 | 148.9052809 |
| YENNORA | Former Alcoa Australia Rolled Products Facility - Area 3 | 1 Kiora CRESCENT | Metal Industry | Regulation under CLM Act not required | -33.86568158 | 150.9649297 |
| YENNORA | Spicer Axle Australia Manufacturing Facility | 205-231 Fairfield ROAD | Other Industry | Regulation under CLM Act not required | -33.85655114 | 150.9579167 |
| YENNORA | Former Caltex Service Station | 137-141 Fairfield STREET | Service Station | Regulation under CLM Act not required | -33.86824768 | 150.9706137 |
| YENNORA | 19 Pine Road, Yennora | Pine ROAD | Metal Industry | Contamination currently regulated under CLM Act | -33.86713232 | 150.9621172 |
| YENNORA | Former Metal Plant | 44 Larra STREET | Metal Industry | Contamination formerly regulated under the CLM Act | -33.86340576 | 150.9764349 |
| YENNORA | TetraPak Site | 6 Foray STREET | Other Industry | Contamination formerly regulated under the CLM Act | -33.8557183 | 150.9561605 |
| YETHOLME | Yetholme CCA Timber Treatment Plant | 351 Eusdale ROAD | Other Industry | Contamination formerly regulated under the CLM Act | -33.45386256 | 149.8537787 |
| YOUNG | Former Mobil Depot and Service Station Young | 149 Lovell STREET | Service Station | Regulation under CLM Act not required | -34.31024587 | 148.290424 |
| YOUNG | Former Shell Depot | 166 Nasmyth STREET | Other Petroleum | Regulation under CLM Act not required | -34.31025192 | 148.2931008 |
| YOUNG | Former battery recycler | 45 Nasmyth STREET | Metal Industry | Contamination currently regulated under CLM Act | -34.31201571 | 148.306772 |
| YOUNG | Mobil Depot | 186 Nasmyth STREET | Other Petroleum | Contamination currently regulated under CLM Act | -34.30954389 | 148.2908476 |
| YOUNG | Former Caltex Depot | 95 Lovell STREET | Service Station | Regulation under CLM Act not required | -34.31127119 | 148.2955092 |
| YOUNG | Adjacent to former battery recycler | 47 Nasmyth STREET | Metal Industry | Contamination formerly regulated under the CLM Act | -34.31176273 | 148.3064765 |
| ZETLAND | Energy Australia/ Ausgrid Zetland Depot | 122 - 138 Joynton AVENUE | Other Industry | Regulation under CLM Act not required | -33.90883116 | 151.2101184 |

| Suburb | SiteName | Address | ContaminationActivityType | ManagementClass | Latitude | Longitude |
|---|---|---|---|---|---|---|
| ZETLAND | Former Goodrich Control Systems, Zetland | 84 - 92 Epsom ROAD | Other Industry | Regulation under CLM Act not required | -33.91025707 | 151.2078048 |

# Search results

Your search for:Suburb: OXFORD FALLS

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

**Search TIP**

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.POEO public register

31 October 2024

Legend | About | Layers

## Legend

### Naturally Occuring Asbestos in NSW

POINT OCCURRENCE DATA

Mineral Occurences - Asbestos Sites

- VLGE
- LGE
- MED
- OCC
- SML

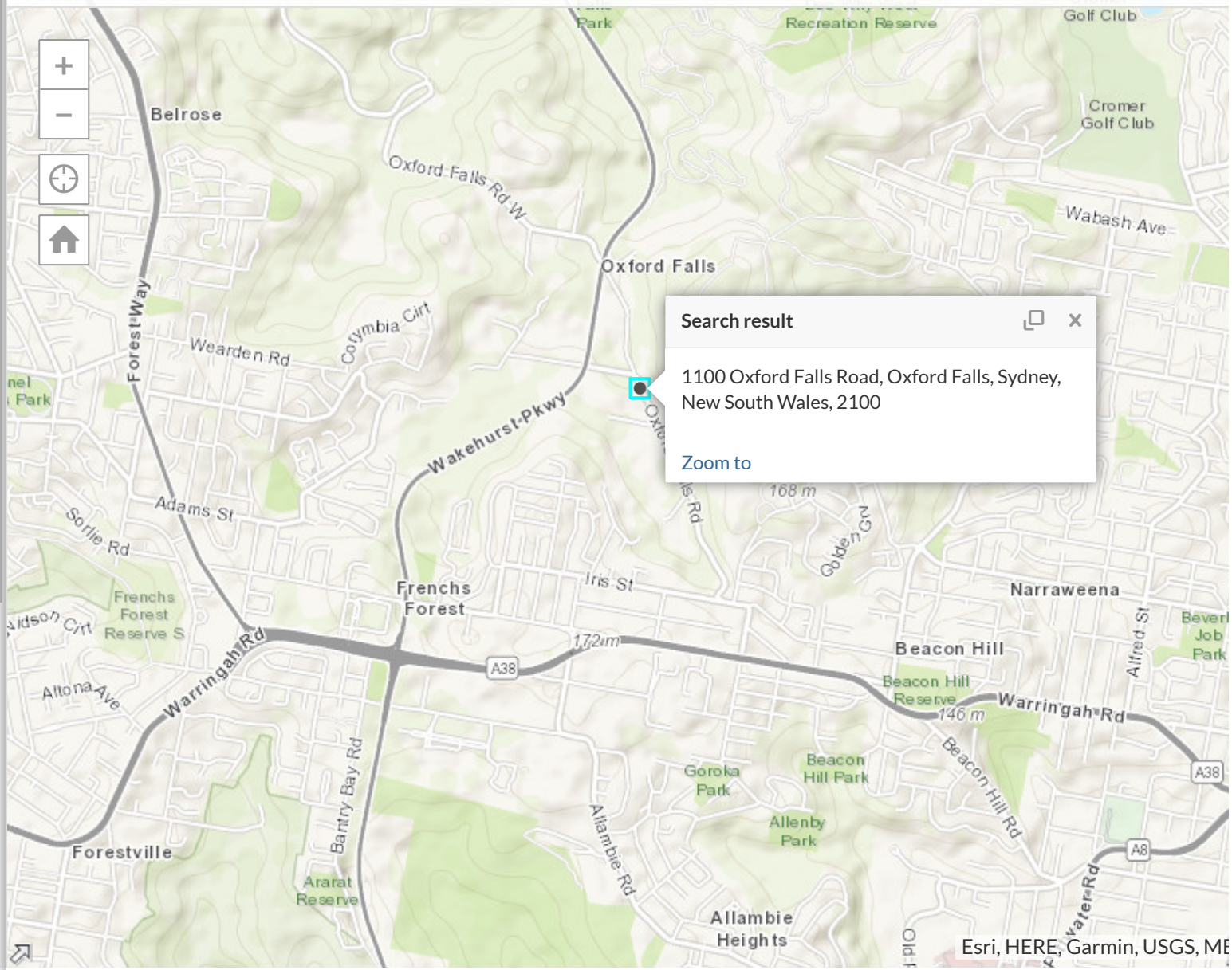
BROKEN HILL - GEOLOGICAL UNITS WITH ASBESTOS POTENTIAL

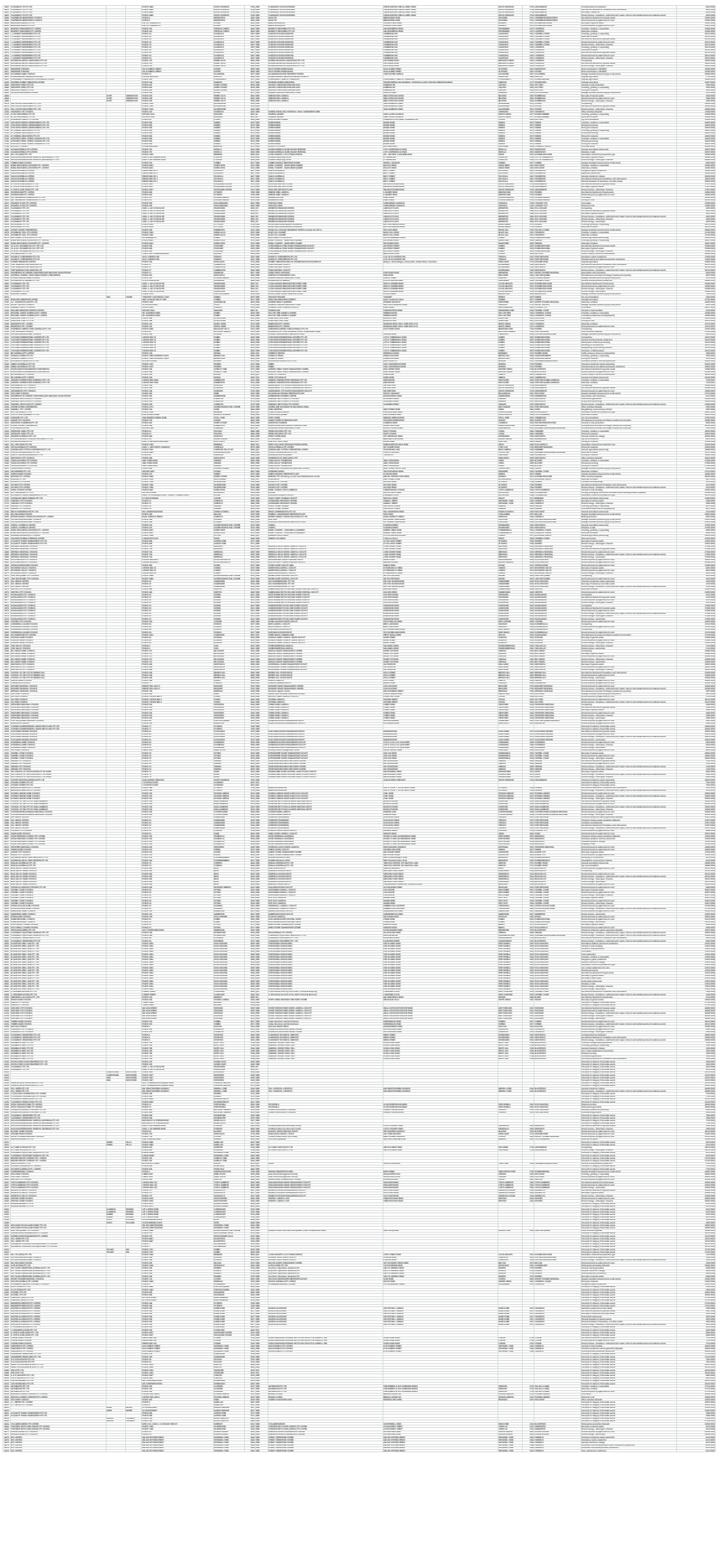
Retrograde Ultrabasic Dykes with MEDIUM asbestos potential

Dykes with HIGH asbestos potential

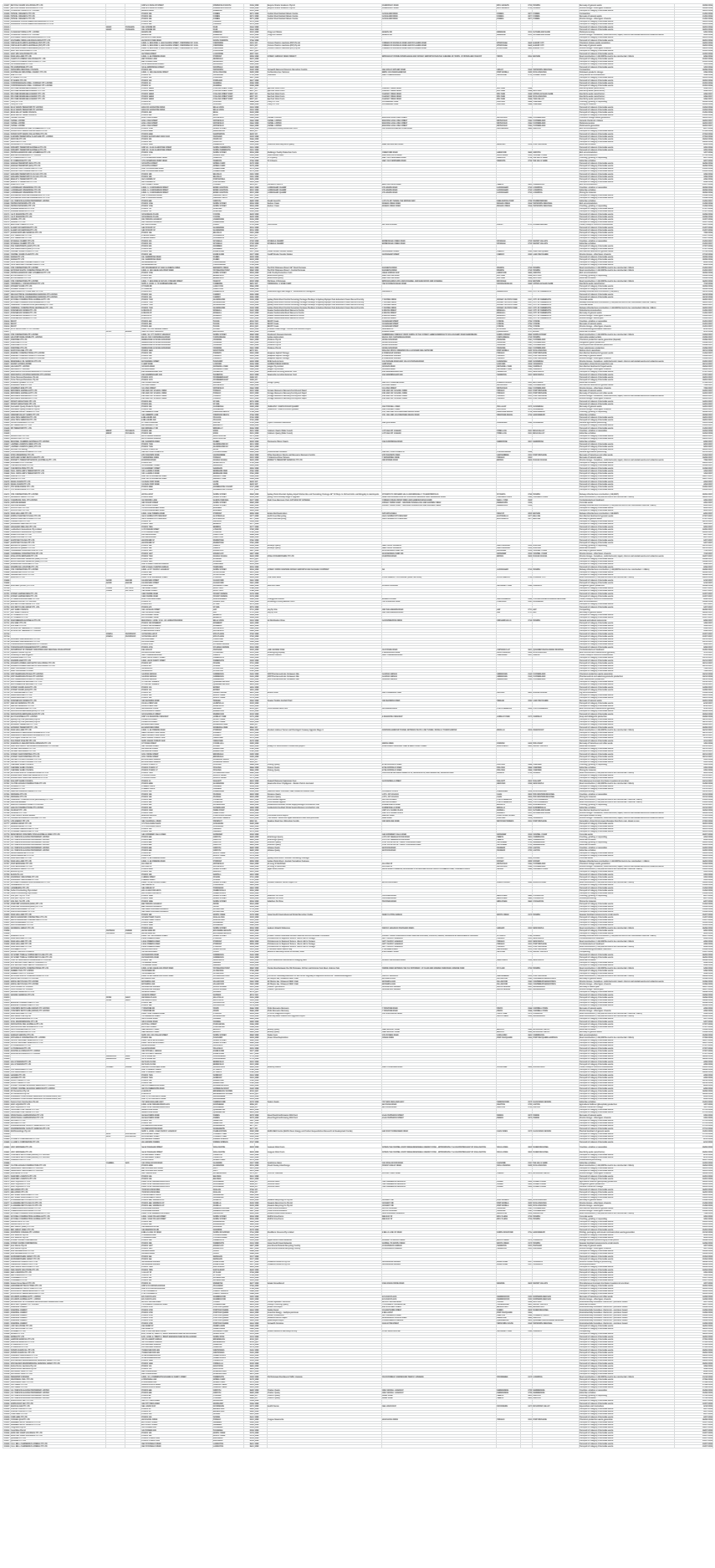
Geological Units with HIGH asbestos potential

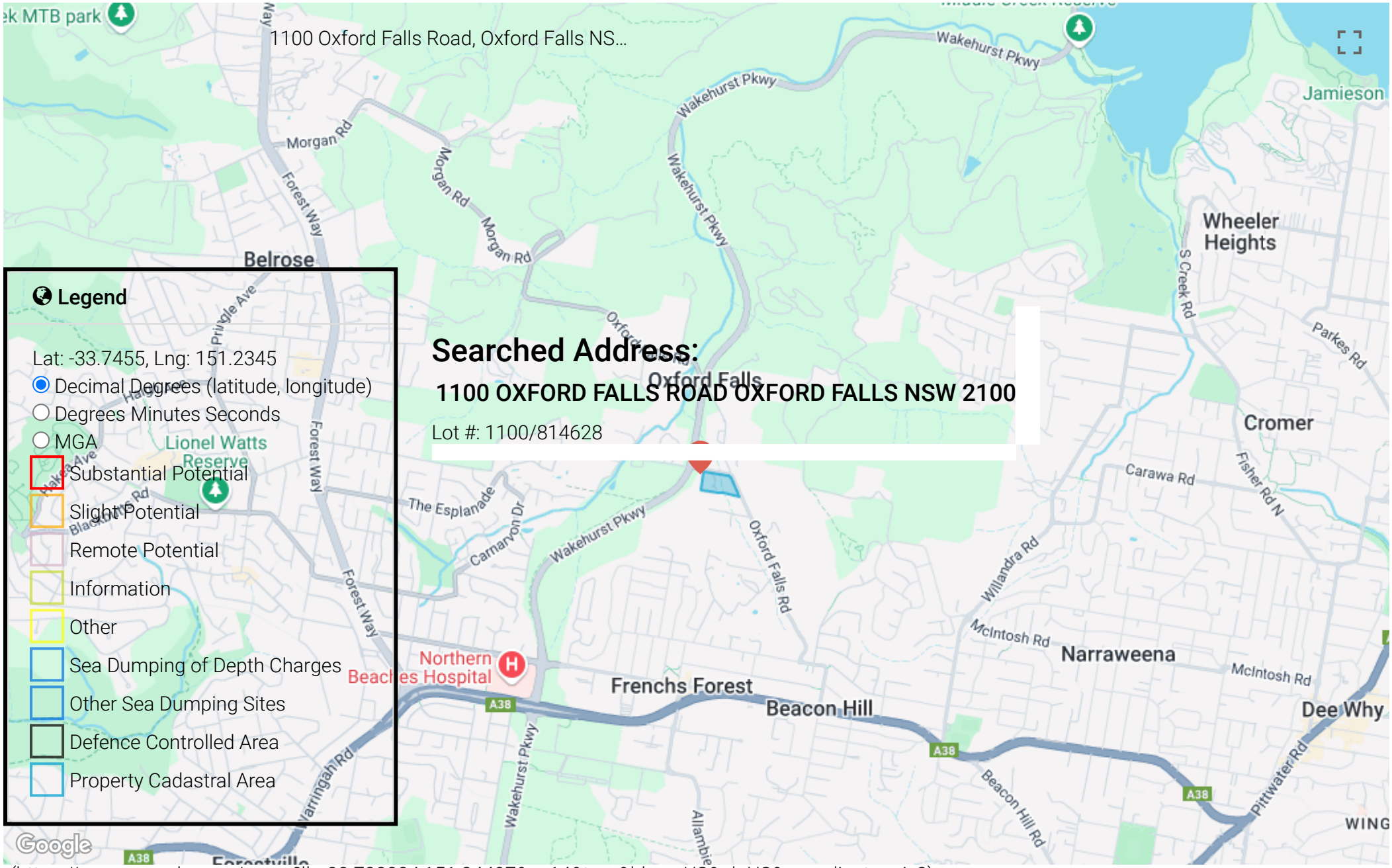
# Naturally Occurring Asbestos in NSW












(https://maps.google.com/maps?ll=-33.738224,151.24497&z=14&t=m&hl=en-US&gl=US&mapclient=apiv3)

# APPENDIX G

## PLANNING 10.7 CERTIFICATES

Aargus

# Northern Beaches Council Planning Certificate – Part 2&5

**Applicant:** Urbis Pty Ltd
Level 8 123 Pitt Street
SYDNEY NSW 2000

**Reference:** P0048248
**Date:** 23/10/2023
**Certificate No.** ePLC2023/07076

**Address of Property:** 1100 Oxford Falls Road OXFORD FALLS NSW 2100
**Description of Property:** Lot 1100 DP 814628

# Planning Certificate – Part 2

The following certificate is issued under the provisions of Section 10.7(2) of the *Environmental Planning and Assessment Act 1979* (as amended – formerly Section 149). The information applicable to the land is accurate as at the above date.

## 1. Relevant planning instruments and Development Control Plans

### (1) The name of each environmental planning instrument and development control plan that applies to the carrying out of development on the land:

#### (a) Local Environmental Plan

Warringah Local Environmental Plan 2000

#### (b) State Environmental Planning Policies and Regional Environmental Plans

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Primary Production) 2021
Chapters 1,2

State Environmental Planning Policy (Resources and Energy) 2021
Chapters 1, 2

State Environmental Planning Policy (Resilience and Hazards) 2021
Chapters 1, 3, 4

State Environmental Planning Policy (Industry and Employment) 2021
Chapters 1, 3

State Environmental Planning Policy (Transport and Infrastructure) 2021
Chapters 1, 2, 3

State Environmental Planning Policy (Biodiversity and Conservation) 2021
Chapters 1, 2, 3, 4, 6, 7

State Environmental Planning Policy (Planning Systems) 2021
Chapters 1, 2

State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021
Chapters 1, 2

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

SEPP 65 – Design Quality of Residential Apartment Development

SEPP (Building Sustainability Index: BASIX)

State Environmental Planning Policy (Biodiversity and Conservation) 2021
Chapters 9, 10

### (c) Development Control Plans

Warringah Development Control Plan 2000 (Notification)

## (2) Draft Environmental Planning Instruments

The name of each proposed environmental planning instrument and draft development control plan, which is or has been subject to community consultation or public exhibition under the Act, that will apply to the carrying out of development on the land.

### (a) Draft Local Environmental Plans

### (b) Draft State Environmental Planning Policies

Draft State Environmental Planning Policy (Environment)

Draft Remediation of Land State Environmental Planning Policy (intended to replace State Environmental Planning Policy 55)

### (c) Draft Development Control Plans

# 2. Zoning and land use under relevant planning instruments

The following matters for each environmental planning instrument or draft environmental planning instrument that includes the land in a zone, however described—

## (1) Zoning and land use under relevant Local Environmental Plans

### (a), (b)

The following information identifies the purposes for which development may be carried out with or without development consent and the purposes for which the carrying out of development is prohibited, for all zones (however described) affecting the land to which the relevant Local Environmental Plan applies.

**Warringah Local Environmental Plan 2000**

The *Warringah Local Environmental Plan 2000* (WLEP2000) categorises permitted land uses into three groups identified within a Locality Statement that applies to the land (see below). Category One land uses are presumed consistent with the Desired Future Character statement for the locality. Category Two land uses may be consistent with the Desired Future Character statement

for the locality. Category Three land uses are generally inconsistent with the Desired Future Character of the locality.

Clause 7 of WLEP 2000 provides that all development requires consent except:-
(i) exempt development, being development of minimal environmental impact identified in Schedule 1 (Exempt Development) when carried out in accordance with the requirements of that Schedule, and
(ii) development identified in Schedule 2 (Other Development not requiring consent), when carried out in accordance with the requirements of that Schedule.

Clause 10 of WLEP 2000 provides that the following development is prohibited:-
(i) development identified as being prohibited within a Locality Statement, and
(ii) signs of the type listed in Schedule 4 (Prohibited Signs).

See below Locality Statement that applies to the land:

**LOCALITY B2 OXFORD FALLS VALLEY**

**DESIRED FUTURE CHARACTER**

The present character of the Oxford Falls Valley locality will remain unchanged except in circumstances specifically addressed as follows.
Future development will be limited to new detached style housing conforming with the housing density standards set out below and low intensity, low impact uses. There will be no new development on ridgetops or in places that will disrupt the skyline when viewed from Narrabeen Lagoon and the Wakehurst Parkway.
The natural landscape including landforms and vegetation will be protected and, where possible, enhanced. Buildings will be located and grouped in areas that will minimise disturbance of vegetation and landforms whether as a result of the buildings themselves or the associated works including access roads and services. Buildings which are designed to blend with the colours and textures of the natural landscape will be strongly encouraged.
A dense bushland buffer will be retained or established along Forest Way and Wakehurst Parkway. Fencing is not to detract from the landscaped vista of the streetscape.
Development in the locality will not create siltation or pollution of Narrabeen Lagoon and its catchment and will ensure that ecological values of natural watercourses are maintained.

**LAND USE**
**Category One**

Nil

**Category Two**

Development for the purpose of the following:

- agriculture
- housing
- housing for older people or people with disabilities (on land described in paragraph (c) under the heading “Housing density” below)
- other buildings, works, places or land uses that are not prohibited or in Category 1 or 3.

**Category Three**

Development for the purpose of the following:

- animal boarding or training establishments
- bulky goods shops
- business premises
- child care centres

- community facilities
- entertainment facilities
- further education
- health consulting rooms
- heliports
- hire establishments
- hospitals
- hotels
- industries
- medical centres
- motor showrooms
- offices
- places of worship
- primary schools
- recreation facilities
- registered clubs
- restaurants
- retail plant nurseries
- service stations
- shops
- short term accommodation
- vehicle repair stations
- veterinary hospitals
- warehouses

**PROHIBITED DEVELOPMENT**

Development for the purpose of the following is prohibited within this locality:

- brothels
- extractive industries
- housing for older people or people with disabilities (other than on land described in paragraph (c) under the heading “Housing density” below)
- potentially hazardous industries
- potentially offensive industries
- vehicle body repair workshops

Canal estate development is also prohibited within this locality.

**BUILT FORM**

**Housing density**

The maximum housing density is 1 dwelling per 20 ha of site area (which does not include the area of any access corridor, whether such access corridor is to be created or is in existence at the time of application for development consent), except:

a. where this standard would prevent the erection of one dwelling on an existing parcel of land, being all adjacent or adjoining land held in the same ownership on 8 March 1974 and having a combined area of not less than 2 ha, and

b. on Portions 199, 200, 985, 986, 1001, 1002, 1003, 1004, 1011, 1012, 1018 and 1019 Parish of Manly Cove and Lot 33 DP 870625 Pinduro Place, Cromer, where one dwelling may be erected provided the land exceeds 4,000m2 in area and was lawfully created prior to 13 August 1982, or was otherwise lawfully created, and

c. on land that adjoins a locality primarily used for urban purposes and on which a dwelling house is permissible, where there is no maximum housing density if the development is for the purpose of “housing for older people or people with a disability” and the development complies with the minimum standards set out in clause 29.

However, consent may be granted for development that will contravene these housing density standards but, if by more than 10 per cent, only with the concurrence of the Director.

The matters which shall be taken into consideration in deciding whether concurrence should be

granted are:

a. whether non-compliance with the development standard in issue raises any matter of significance for the State or regional environmental planning, and
b. the public benefit or maintaining the planning controls adopted by this plan.

To measure housing density

- the site area is divided by the number of dwellings proposed on the site, including any existing dwellings which are to be retained,
- the site is the allotment which existed on the day this plan came into effect, and
- granny flats are not considered to be a dwelling and are limited to one per allotment.

In calculating housing density, the area of any access corridor (including any right-of-carriageway, access handle, accessway or other area that provides for vehicle access) is to be excluded, whether that access corridor is to be created or is in existence at the time of application for subdivision.

**Building height**

Buildings are not to exceed 8.5 metres in height, where height is the distance measured vertically between the topmost point of the building (not being a vent or chimney or the like) and the natural ground level below.

Buildings are not to exceed 7.2 metres from natural ground level to the underside of the ceiling on the uppermost floor of the building (excluding habitable areas located wholly within a roof space), but this standard may be relaxed on sites with slopes greater than 20 per cent within the building platform (measured at the base of the walls of the building), provided the building does not exceed the 8.5 metre height standard, is designed and located to minimise the bulk of the building and has minimal visual impact when viewed from the downslope sides of the land.

**Front building setback**

Development is to maintain a minimum front building setback.

The minimum front building setback to all roads is 20 metres. On corner allotments fronting Forest Way or Wakehurst Parkway the minimum front building setback is to apply to those roads and the side setback is to apply to the secondary road.

The minimum front building setback area is to be densely landscaped using locally occurring species of canopy trees and shrubs and be free of any structures, carparking or site facilities other than driveways, letterboxes and fences.

**Rear and Side Building Setback**

Development is to maintain minimum rear and side building setbacks.

The minimum rear and side building setbacks is 10 metres.

The rear and side setback areas are to be landscaped and free of any structures, carparking or site facilities other than driveways and fences.

**Landscaped Open Space**

The minimum area of landscaped open space is 30 per cent of the site area.

To measure an area of landscaped open space:

a. impervious surfaces such as driveways, paved areas, roofed areas, tennis courts, carparking and stormwater structures, decks and the like and any areas with a width or length of less than 2 metres are excluded from the landscaped open space area, and
b. the water surface of swimming pools and impervious surfaces that occur naturally such as rock outcrops are included in the landscaped open space area, and
c. landscaped open space must be at ground level, and
d. the minimum soil depth of land that can be included as landscaped open space is 1 metre.

**National Park setback**

Development is to maintain a minimum setback from National Park boundaries of 20 metres.

The minimum setback is to fire fuel reduced and landscaped with local species.

**COMPLYING DEVELOPMENT**

The following table shows the development which is complying development in this locality. Column A describes the development and Column B shows the requirements that the development must comply with for it to be complying development

| **Column A** | **Column B** |
|---|---|
| Development for the purpose of: | As described in Schedule 12 - Part A |
| Single storey detached houses, being:<br>construction of new single storey houses.<br>alterations to single storey houses.<br>additions to single storey houses.<br>constructions of carports, garages and outbuildings associated with a dwelling. | |
| Swimming pools | As described in Schedule 12 - Part B |

**HERITAGE ITEMS**

The following items of local heritage significance are within this locality:

- Oxford Falls Public School, Dreadnought Road, Oxford Falls

**CONSERVATION AREAS**

Land adjacent to Wakehurst Parkway as shown on the map

## (c) Additional permitted uses

Additional permitted uses, if any, for which development is permissible with development consent pursuant to Clause 2.5 and Schedule 1 of the relevant Local Environmental Plan:

Nil

## (d) Minimum land dimensions

The erection of a dwelling house is permitted subject to any housing density requirements set out in the above Locality Statement.

## (e) Outstanding biodiversity value

The land is not in an area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*

## (f) Conservation areas

Refer to the above Locality Statement to determine whether this land is identified as a heritage conservation area under *Warringah Local Environmental Plan 2000*.

## (g) Item of environmental heritage

Refer to the above Locality Statement to determine whether this land contains a heritage item under *Warringah Local Environmental Plan 2000*.

### (2) Zoning and land use under draft Local Environmental Plans

For any proposed changes to zoning and land use, see Part 1.2 (a)
Please contact Council's Strategic and Place Planning unit with enquiries on 1300 434 434.

## 3. Contribution plans

(1) The name of each contributions plan under the Act, Division 7.1 applying to the land, including draft contributions plans.

**Northern Beaches Section 7.12 Contributions Plan 2022 - in force 1 June 2022.**

(2) If the land is in a region within the meaning of the Act, Division 7.1, Subdivision 4 - the name of the region, and the name of the Ministerial planning order in which the region is identified.

**Housing and Productivity Contribution**
The subject land is within the Greater Sydney area to which the Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2023 applies.

(3) If the land is in a special contributions area to which a continued 7.23 determination applies, the name of the area.

Nil

## 4. Complying Development

If the land is land on which complying development may or may not be carried out under each of the complying development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.17A(1)(c)–(e), (2), (3) or (4), 1.18(1)(c3) or 1.19.

### Part 3 Housing Code

Complying Development under the Housing Code may be carried out on all of the land.

### Part 3A Rural Housing Code

Complying Development under the Rural Housing Code may be carried out on all of the land.

### Part 3B Low Rise Housing Diversity Code

Complying Development under the Low Rise Housing Diversity Code may be carried out on all of the land.

### Part 3C Greenfield Housing Code

Complying Development under the Greenfield Housing Code may not be carried out on all of the land.

### Part 3D Inland Code

Complying Development under the Inland Code does not apply to the land.

**Note**: Pursuant to clause 3D.1 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, the Inland Code only applies to 'inland local government areas'. Northern Beaches local government area is not defined as an 'inland local government area' by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

### Part 4 Housing Alterations Code

Complying Development under the Housing Alterations Code may be carried out on all of the land.

### Part 4A General Development Code

Complying Development under the General Development Code may be carried out on all of the land.

### Part 5 Industrial and Business Alterations Code

Complying Development under the Industrial and Business Alterations Code may be carried out on all of the land.

### Part 5A Industrial and Business Buildings Code

Complying Development under the Industrial and Business Buildings Code may be carried out on all of the land.

### Part 5B Container Recycling Facilities Code

Complying Development under the Container Recycling Facilities Code may be carried out on all of the land.

### Part 6 Subdivisions Code

Complying Development under the Subdivisions Code may be carried out on all of the land.

### Part 7 Demolition Code

Complying Development under the Demolition Code may be carried out on all of the land.

### Part 8 Fire Safety Code

Complying Development under the Fire Safety Code may be carried out on all of the land.

### (4) Complying Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*

No complying codes are varied under this clause in relation to the land.

## 5. Exempt Development

If the land is land on which exempt development may or may not be carried out under each of the exempt development codes under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*, because of that Policy, clause 1.16(1)(b1)–(d) or 1.16A.

### Part 2 Exempt Development Codes

Exempt Development under the Exempt Development Codes may be carried out on all of the land.

### (4) Exempt Development Codes varied under Clause 1.12 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*

No exempt development codes are varied under this clause in relation to the land.

## 6. Affected building notices and building product rectification orders

(a) There is not an affected building notice of which the council is aware that is in force in respect of the land.

(b) There is not a building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with, and

(c) There is not a notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding.

In this section—

***affected building notice*** has the same meaning the *Building Products (Safety) Act 2017, Part 4*.

***building product rectification order*** has the same meaning as in the *Building Products (Safety) Act 2017*.

## 7. Land reserved for acquisition

Environmental planning instrument referred to in Clause 1 does not make provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

## 8. Road widening and road realignment

(a) The land is not affected by a road widening or re-alignment proposal under Division 2 of Part 3 of the *Roads Act 1993*.

(b) The land is not affected by a road widening or re-alignment proposal under an environmental planning instrument.

(c) The land is not affected by a road widening or re-alignment proposal under a resolution of Council.

## 9. Flood related development controls

(1) The land is within the flood planning area and subject to flood related development controls.

(2) The land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

In this section—

**flood planning area** has the same meaning as in the Floodplain Development Manual.

**Floodplain Development Manual** means the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.

**probable maximum flood** has the same meaning as in the Floodplain Development Manual.

## 10. Council and other public authority policies on hazard risk restriction

(a) Council has adopted policies that restrict the development of the land because of the likelihood of land slip, bush fire, tidal inundation, subsidence, acid sulfate soils, contamination, aircraft noise, salinity, coastal hazards, sea level rise or another risk, other than flooding (for flooding – see 9). The identified hazard or risk, if any, are listed below:

Nil

(b) The following information applies to any policy as adopted by any other public authority and notified to the Council for the express purpose of its adoption by that authority being referred to in a planning certificate issued by the Council. The identified hazard or risk and the respective Policy which affect the property, if any, are listed below:

**Bush Fire Prone Land**
This land is identified on a Bush Fire Prone Land map certified by the Commissioner of the NSW Rural Fire Service as being bush fire prone land. The requirements of the NSW Rural Fire Service document Planning for Bush Fire Protection apply to this land. For further information please contact the Northern Beaches District NSW Rural Fire Service.

## 11. Bush fire prone land

Some of the land is bush fire prone land.

## 12. Loose-fill asbestos insulation

The residential dwelling erected on this land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

This clause applies to residential premises (within the meaning of Division 1A of part 8 of the Home Building Act 1989) that are listed in the register that is required to be maintained under that Division.

Contact NSW Fair Trading for more information.

## 13. Mine Subsidence

The land is not declared to be a mine Subsidence (Mine Subsidence) district within the meaning of section 15 of the *Mine Subsidence (Mine Subsidence) Compensation Act, 1961*.

## 14. Paper subdivision information

There is no current paper subdivision, of which council is aware, in respect of this land according to Part 10 of the *Environmental Planning and Assessment Regulation 2021* and Schedule 7 of the *Environmental Planning & Assessment Act 1997 No 203*.

## 15. Property vegetation plans

The Council has not been notified that the land is land to which a vegetation plan under the *Native Vegetation Act 2003* applies.

## 16. Biodiversity Stewardship Sites

The Council has not been notified by the Biodiversity Conservation Trust that the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (includes land to which a biobanking agreement under Part 7A of the repealed *Threatened Species Conservation Act 1995* relates).

## 17. Biodiversity certified land

The land is not biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016* (includes land certified under Part 7AA of the repealed *Threatened Species Conservation Act 1995*).

## 18. Orders under Trees (Disputes Between Neighbours) Act 2006

Council has not been notified of the existence of an order made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land.

## 19. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

The owner of the land (or any previous owner) has not consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

Note—
Existing coastal protection works are works to reduce the impact of coastal hazards on land, such as seawalls, revetments, groynes and beach nourishment, that existed before 1 January 2011.

## 20. Western Sydney Aerotropolis

Under State Environmental Planning Policy (Precincts – Western Parkland City) 2021, Chapter 4 the land is –

(a) not in an ANEF or ANEC contour of 20 or greater, as referred to in that Chapter, section 4.17, or

(b) not shown on the Lighting Intensity and Wind Shear Map, or

(c) not shown on the Obstacle Limitation Surface Map, or

(d) not in the "public safety area" on the Public Safety Area Map, or

(e) not in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map.

## 21. Development consent conditions for seniors housing

No condition of development consent granted after 11 October 2007 in relation to the land applies to the property that are of the kind set out in that Policy, section 88(2) of *State Environmental Planning Policy (Housing) 2021*.

## 22. Site compatibility certificate and conditions for affordable rental housing

(1) There is not a current site compatibility certificate of which the council is aware, in respect of proposed development on the land.

(2) No condition of development consent in relation to the land applies to the property that are of the kind set out in section 21(1) or 40(1) of *State Environmental Planning Policy (Housing) 2021*.

(3) No condition of development consent in relation to the land applies to the property that are of the kind set out in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009*.

## Additional matters under the Contaminated Land Management Act 1997

Note. The following matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) the land to which the certificate relates is not significantly contaminated land within the meaning of that Act

(b) the land to which the certificate relates is not subject to a management order within the meaning of that Act

(c) the land to which the certificate relates is not the subject of an approved voluntary management proposal within the meaning of that Act

(d) the land to which the certificate relates is not subject to an ongoing maintenance order within the meaning of that Act

(e) the land to which the certificate relates is not the subject of a site audit statement

If contamination is identified above please contact the Environmental Protection Authority (EPA) for further information.

# Planning Certificate – Part 5

The following is information provided in good faith under the provisions of Section 10.7(5) of the *Environmental Planning and Assessment Act 1979* (as amended – formerly Section 149) and lists relevant matters affecting the land of which Council is aware. The Council shall not incur any liability in respect of any such advice.

Persons relying on this certificate should read the environmental planning instruments referred to in this certificate.

## Company Title Subdivision

Clause 4.1 of the *Pittwater Local Environmental Plan 2014*, *Warringah Local Environmental Plan 2011* or *Manly Local Environmental Plan 2013* provides that land may not be subdivided except with the consent of the Council. This includes subdivision by way of company title schemes. Persons considering purchasing property in the Northern Beaches local government area the subject of a company title scheme are advised to check that the land has been subdivided with the consent of the Council.

## District Planning

Under the Greater Sydney Regional Plan – A Metropolis of Three Cities 2018, the Greater Sydney Commission sets a planning framework for a metropolis of three cities across Greater Sydney which reach across five Districts. Northern Beaches is located within the 'Eastern Harbour City' area and is in the North District which forms a large part of the Eastern Harbour City. The North District Plan sets out planning priorities and actions for the growth of the North District, including Northern Beaches. Northern Beaches Council's Local Strategic Planning Statement gives effect to the District Plan based on local characteristics and opportunities and Council's own priorities in the community. The Local Strategic Planning Statement came into effect on 26 March 2020.

## Council Resolution To Amend Environmental Planning Instrument

The following instrument or resolution of Council proposes to vary the provisions of an environmental planning instrument, other than as referred to in the Planning Certificate – Part 2:

**Planning Proposal - rezone deferred land within the Oxford Falls Valley & Belrose North area**

**Applies to land:** Land within the B2 Oxford Falls Valley and C8 Belrose North localities of WLEP 2000 and land zoned E4 Environmental Living under WLEP 2011 at Cottage Point (Boundaries identified within the Planning Proposal)

**Outline:** Amends WLEP 2000 and WLEP 2011 to:

- Transfer the planning controls for land within the B2 Oxford Falls Valley and C8 Belrose North localities of WLEP 2000 into the best fit zones and land use controls under WLEP 2011
- Rezone the majority of the subject land to E3 Environmental Management under WLEP 2011
- Rezone smaller parcels of land to E4 Environmental Living, RU4 Primary Production Small Lots, SP2 Infrastructure, SP1 Special Activities, R5 Large Lot Residential and R2 Low Density Residential under WLEP 2011
- Include various parcels of land as having additional permitted uses under Schedule 1 of WLEP 2011

**Council resolution:** 24 February 2015

# Additional Information Applying To The Land

Additional information, if any, relating to the land the subject of this certificate:

**Geotechnical Planning Controls**
Council is currently undertaking a study to review geotechnical planning controls across the Local Government Area. Information from a draft study indicates geotechnical considerations may affect a greater number of properties and may present an increased risk to properties than that shown on published hazard maps. Council's Development Engineering & Certification team can be contacted for further information.

**Councils protection of Waterways and Riparian Land Policy**
Council's Protection of Waterways and Riparian Land Policy (former Warringah) applies to the land.

# General Information

**Threatened Species**
Many threatened species identified under the *Biodiversity Conservation Act 2016* (NSW) and Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) are found within the former Local Government Area of Warringah (now part of Northern Beaches). Council's Natural Environment unit can be contacted to determine whether any site specific information is available for this property. Records of threatened flora and fauna are also available from the NSW Office of Environment and Heritage's Atlas of NSW Wildlife database: <http://www.bionet.nsw.gov.au>

Potential threatened species could include:

(a) threatened species as described in the final determination of the scientific committee to list endangered and vulnerable species under Schedule 1 of the *Biodiversity Conservation Act 2016*, and/or

(b) one or more of the following threatened ecological communities as described in the final determination of the scientific committee to list the ecological communities under Schedule 2 of the *Biodiversity Conservation Act 2016*:

- Duffys Forest Ecological Community in the Sydney Basin Bioregion
- Swamp Sclerophyll Forest on Coastal Floodplain
- Coastal Saltmarsh of the Sydney Basin Bioregion
- Swamp Oak Floodplain Forest
- Bangalay Sand Forest of the Sydney Basin Bioregion
- Themeda grasslands on Seacliffs and Coastal Headlands
- Sydney Freshwater Wetlands in the Sydney Basin Bioregion
- Coastal Upland Swamp in the Sydney Basin Bioregion
- River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions

**Bush fire**
Certain development may require further consideration under section 79BA or section 91 of the Environmental Planning and Assessment Act 1979, and section 100B of the Rural Fires Act, 1997 with respect to bush fire matters. Contact NSW Rural Fire Service.

**Aboriginal Heritage**

Many Aboriginal objects are found within the Local Government Area. It is prudent for the purchaser of land to make an enquiry with the Office of Environment and Heritage as to whether any known Aboriginal objects are located on the subject land or whether the land has been declared as an Aboriginal place under the *National Parks and Wildlife Act 1974* (NSW). The carrying out of works may be prevented on land which is likely to significantly affect an Aboriginal object or Aboriginal place. For information relating to Aboriginal sites and objects across NSW, contact: Aboriginal Heritage Information Management System (AHIMS) on (02) 9585 6345 or email **AHIMS@environment.nsw.gov.au**. Alternatively visit http://www.environment.nsw.gov.au/licences/AboriginalHeritageInformationManagementSystem.htm.

**Coastal Erosion**
Information available to Council indicates coastal erosion may affect a greater number of properties and may present an increased risk to properties than that shown on published hazard maps of the Warringah coastline. Council's Natural Environment Unit can be contacted for further information.

**Coastal Hazards**
Information available to Council indicates properties within the suburb of Cottage Point may be affected by coastal hazards. Please contact Northern Beaches Council for further information.



**Scott Phillips**
**Chief Executive Officer**
**23/10/2023**

# APPENDIX H

## GROUNDWATER BORE SEARCH

Aargus

# WaterNSW
## Work Summary

### GW108250

**Licence:** 10BL601714
**Licence Status:** CONVERTED

**Authorised Purpose(s):** RECREATION (GROUNDWATER)
**Intended Purpose(s):** RECREATION (GROU

**Work Type:** Bore
**Work Status:**
**Construct.Method:** Rotary
**Owner Type:**

**Commenced Date:**
**Completion Date:** 29/01/2007
**Final Depth:** 90.00 m
**Drilled Depth:** 90.00 m

**Contractor Name:** INTERTEC DRILLING SERVICES
**Driller:** Colin Leslie Barden
**Assistant Driller:**

**Property:** TRUSTEES OF THE CHRISTIAN BROS
1 Dreadnought Rd OXFORD FALLS 2100
NSW
**Standing Water Level (m):** 21.000
**GWMA:**
**GW Zone:**
**Salinity Description:**
**Yield (L/s):** 4.450

## Site Details

**Site Chosen By:**

| | County | Parish | Cadastre |
|---|---|---|---|
| **Form A:** | CUMBERLAND | MANLY COV | 10 810343 |
| **Licensed:** | CUMBERLA | MANLYCOV | Whole Lot 10//810343 |

**Region:** 10 - Sydney South Coast
**River Basin:** - Unknown
**Area/District:**
**CMA Map:**
**Grid Zone:**
**Scale:**

**Elevation:** 0.00 m (A.H.D.)
**Elevation Source:** Unknown
**Northing:** 6265269.000
**Easting:** 337075.000
**Latitude:** 33°44'24.4"S
**Longitude:** 151°14'28.3"E

**GS Map:** -
**MGA Zone:** 56
**Coordinate Source:** Unknown

## Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Hole | Hole | 0.00 | 5.50 | 203 | | | Down Hole Hammer |
| 1 | | Hole | Hole | 5.50 | 90.00 | 159 | | | Down Hole Hammer |
| 1 | 1 | Casing | Steel | -0.50 | 5.50 | 168 | 158 | | Driven into Hole |
| 1 | 1 | Casing | Pvc Class 9 | 0.50 | 43.50 | 140 | | | Suspended in Clamps, Screwed and Glued |

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| 28.00 | 31.00 | 3.00 | Unknown | | | 0.05 | 32.00 | 00:15:00 | 300.00 |
| 44.00 | 44.50 | 0.50 | Unknown | | | 4.45 | 48.00 | 00:15:00 | 370.00 |

## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|
| 0.00 | 0.50 | 0.50 | CLAY | Clay | |
| 0.50 | 2.50 | 2.00 | SANDSTONE WEATHEREAD | Sandstone | |
| 2.50 | 4.00 | 1.50 | SANDY CLAY | Invalid Code | |
| 4.00 | 8.00 | 4.00 | SANDSTONE WEATHEREAD | Sandstone | |
| 8.00 | 9.00 | 1.00 | SHALE | Shale | |
| 9.00 | 28.00 | 19.00 | SANDSTONE GREY | Sandstone | |
| 28.00 | 31.00 | 3.00 | SANDSTONE BROWN QUARTZ | Sandstone | |
| 31.00 | 34.00 | 3.00 | SANDSTONE GREY | Sandstone | |
| 34.00 | 34.20 | 0.20 | SANDSTONE FRACTURED | Sandstone | |
| 34.20 | 42.00 | 7.80 | SANDSTONE GREY | Sandstone | |
| 42.00 | 44.00 | 2.00 | SANDSTONE QUARTZ | Sandstone | |
| 44.00 | 44.50 | 0.50 | SANDSTONE FRACTURED | Sandstone | |
| 44.50 | 53.00 | 8.50 | SILTSTONE | Siltstone | |
| 53.00 | 57.00 | 4.00 | SANDSTONE GREY | Sandstone | |
| 57.00 | 59.00 | 2.00 | SANDSTONE QUARTZ | Sandstone | |
| 59.00 | 63.00 | 4.00 | SANDSTONE GREY | Sandstone | |
| 63.00 | 65.50 | 2.50 | SANDSTONE QUARTZ | Sandstone | |
| 65.50 | 81.00 | 15.50 | SANDSTONE GREY | Sandstone | |
| 81.00 | 83.00 | 2.00 | SANDSTONE QUARTZ | Sandstone | |
| 83.00 | 90.00 | 7.00 | SANDSTONE GREY | Sandstone | |

## Remarks

22/08/2007: Previous Lic No:10BL601185

***** End of GW108250 *****

**Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.**

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**All Groundwater Site details**

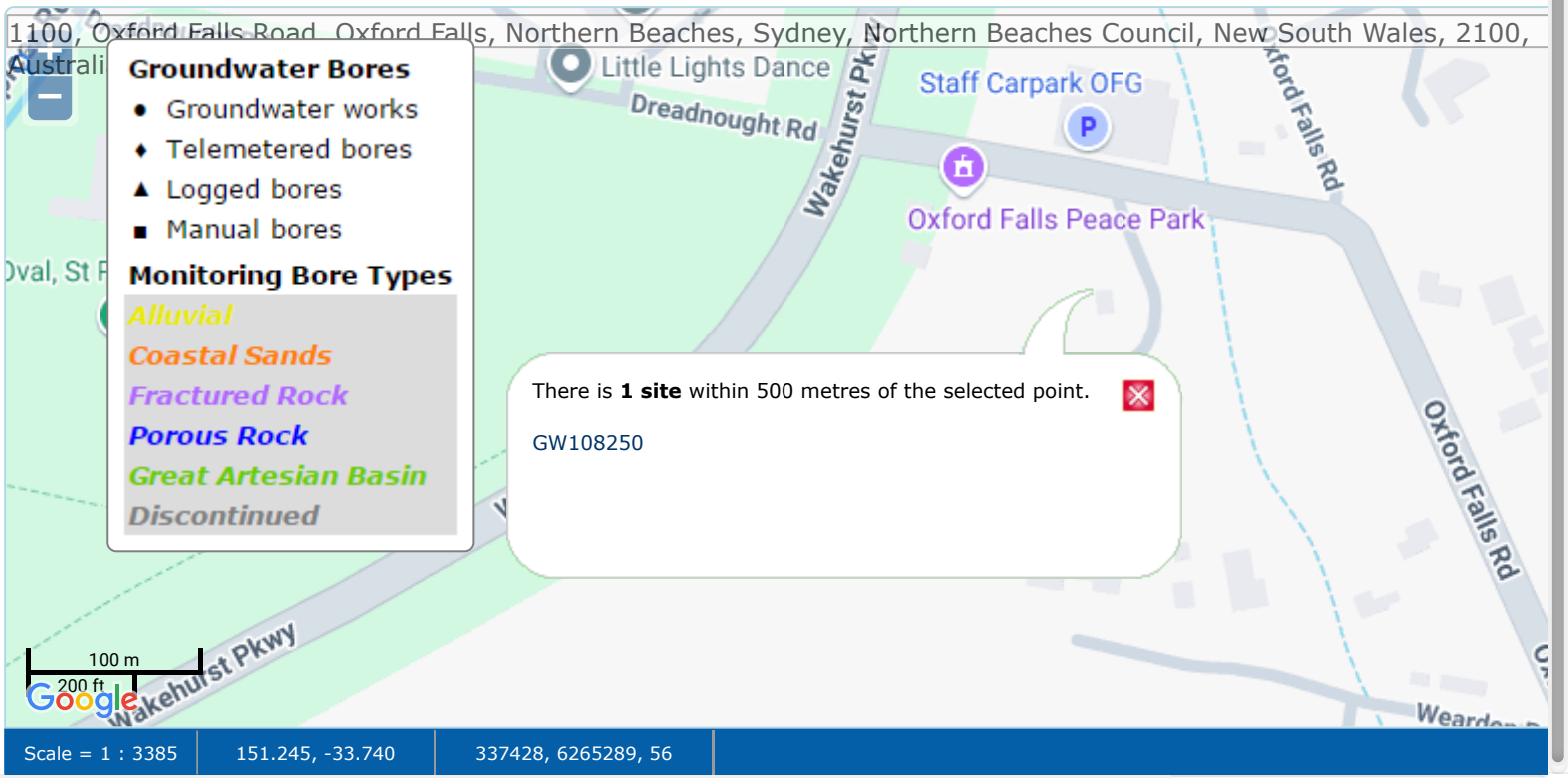
All Groundwater Site Details

# ALL GROUNDWATER MAP

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All data times are Eastern Standard Time

Map Info




contact WaterNSW

# APPENDIX I

## LOCAL METEOROLOGY



# Monthly Rainfall (millimetres)

## COLLAROY (LONG REEF GOLF CLUB)

Station Number: 066126 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.74°S · Longitude: 151.31°E · Elevation: 2 m

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1965** | | | | | | | | 10.5 | 118.9 | 169.7 | 33.0 | 66.1 | |
| **1966** | 17.8 | 124.4 | 89.8 | 180.8 | 82.9 | 155.0 | 14.5 | 87.5 | 73.3 | 47.9 | 180.3 | 95.4 | 1149.6 |
| **1967** | 144.6 | 224.0 | 134.1 | 73.1 | 74.3 | 300.9 | 39.9 | 161.8 | 91.0 | 94.4 | 181.1 | 79.3 | 1598.5 |
| **1968** | 201.3 | 15.5 | 128.8 | 14.2 | 182.9 | 29.5 | 105.6 | 29.7 | 7.6 | 6.9 | 38.1 | 103.1 | 863.2 |
| **1969** | 80.7 | 271.1 | 84.4 | 167.1 | 56.0 | 198.3 | 24.4 | 149.6 | 164.5 | 69.6 | 272.1 | 3.3 | 1541.1 |
| **1970** | 116.3 | 19.0 | 70.2 | 7.6 | 0.0 | 9.2 | 3.8 | 18.3 | 288.7 | 8.9 | 76.4 | 210.8 | 829.2 |
| **1971** | 285.6 | 239.1 | 114.9 | 191.5 | 154.3 | 82.2 | 21.2 | 114.5 | 19.9 | 0.8 | 77.1 | 93.9 | 1395.0 |
| **1972** | 339.5 | 91.5 | 159.2 | 67.0 | 91.7 | 121.8 | 3.0 | 34.0 | 3.8 | 123.1 | 75.6 | 59.0 | 1169.2 |
| **1973** | 309.7 | 290.2 | 42.9 | 64.0 | 1.3 | 77.5 | 89.6 | 91.6 | 60.5 | 143.2 | 78.8 | 61.4 | 1310.7 |
| **1974** | 159.0 | 92.4 | 262.9 | 282.9 | 209.4 | 159.5 | 16.3 | 115.7 | 24.4 | 60.4 | | | |
| **1975** | 24.3 | 131.5 | 291.4 | 154.2 | 24.3 | 303.0 | 47.2 | 36.6 | 71.8 | 127.8 | 14.5 | 29.4 | 1256.0 |
| **1976** | 260.8 | 138.0 | 321.8 | 52.2 | 62.2 | 120.6 | 179.3 | 42.4 | 90.7 | 190.6 | 59.7 | 9.8 | 1528.1 |
| **1977** | 101.6 | 138.3 | 195.0 | 37.2 | 93.6 | 98.5 | 17.8 | 15.2 | 79.3 | 15.0 | 48.0 | 74.7 | 914.2 |
| **1978** | 215.5 | 4.2 | 190.5 | 97.4 | 132.7 | 233.4 | 19.7 | 57.1 | 106.2 | 68.8 | 91.5 | 64.5 | 1281.5 |
| **1979** | 99.5 | 17.9 | 143.6 | 14.4 | 82.9 | 184.0 | 9.0 | 7.0 | 25.4 | 50.4 | 73.6 | | |
| **1997** | | | 19.5 | 25.0 | 223.5 | 87.0 | 175.0 | 34.5 | | | 15.0 | 32.5 | |
| **1998** | 92.5 | 22.0 | | 296.5 | 234.5 | 104.5 | 106.5 | | 54.0 | 62.0 | | 84.0 | |
| **1999** | 150.5 | 146.5 | 39.0 | | 98.0 | | 124.5 | | | | | | |
| **2000** | | | 234.0 | | 62.0 | 37.0 | 58.0 | 41.0 | | | | 78.5 | |
| **2001** | 87.5 | | 92.0 | 94.0 | 374.5 | 11.0 | 183.5 | 95.0 | | | 97.5 | | |
| **2002** | 70.0 | 316.0 | | 43.0 | | 37.0 | 31.0 | 105.0 | 29.0 | 9.0 | 27.0 | 109.0 | |
| **2003** | 2.5 | 65.0 | | | 325.0 | | 81.0 | 48.0 | | | 118.0 | 41.0 | |
| **2004** | 54.0 | 103.0 | 84.0 | 53.0 | 4.0 | 36.0 | 68.0 | | | | 83.0 | 70.0 | |
| **2005** | 63.0 | 141.0 | 88.0 | 38.0 | 95.0 | | 98.0 | 4.0 | 48.0 | 69.0 | 106.0 | 36.0 | |
| **2006** | 179.0 | | 28.0 | 10.0 | 101.0 | 206.0 | 123.0 | 81.2 | 142.0 | 21.8 | | 64.0 | |
| **2007** | 67.6 | *75.2* | 67.0 | 288.4 | 30.8 | 392.4 | 32.4 | 99.0 | 37.9 | 14.4 | 172.0 | 116.0 | *1393.1* |
| **2008** | *8.0* | 234.6 | 40.0 | 125.6 | 3.9 | 126.1 | 103.6 | 57.4 | 71.6 | 67.2 | 53.8 | 41.4 | *933.2* |
| **2009** | 34.9 | 144.6 | 40.8 | 135.2 | 198.6 | 130.4 | 52.4 | 6.0 | 4.4 | 134.6 | 5.0 | 71.4 | 958.3 |
| **2010** | 32.2 | *255.6* | 99.2 | 28.0 | 230.0 | *201.0* | 77.8 | 33.2 | 46.8 | 62.0 | 147.0 | 80.6 | *1293.4* |
| **2011** | 40.2 | 29.8 | 282.2 | 188.8 | 124.6 | 72.0 | 258.6 | 74.0 | 87.2 | 37.8 | 139.0 | 104.2 | 1438.4 |
| **2012** | 123.4 | 209.2 | 200.2 | 169.6 | 52.2 | 262.4 | 44.4 | 16.8 | 25.6 | 22.0 | 38.6 | 42.2 | 1206.6 |
| **2013** | 199.2 | 180.0 | 99.6 | 165.0 | 72.8 | 323.0 | 34.2 | 13.0 | 49.8 | 59.2 | 168.2 | 28.2 | 1392.2 |
| **2014** | 28.8 | 47.6 | 101.0 | 126.2 | 28.0 | 88.2 | 20.8 | 215.0 | 100.4 | 47.8 | 19.8 | 105.6 | 929.2 |
| **2015** | 191.3 | 57.2 | 52.8 | 288.4 | 150.4 | 108.6 | 49.4 | 53.4 | 91.4 | 31.6 | 159.0 | 78.4 | 1311.9 |
| **2016** | 231.6 | 16.4 | 178.2 | 45.8 | 4.6 | | 111.4 | 93.0 | 90.6 | 27.0 | 28.8 | 63.4 | |
| **2017** | 24.6 | 205.6 | 196.2 | 81.6 | 48.0 | 156.8 | 21.8 | 18.8 | 1.2 | 29.6 | 71.4 | 54.2 | 909.8 |
| **2018** | 50.6 | 80.2 | 99.8 | 46.2 | 22.8 | 190.8 | 2.6 | 13.0 | 50.8 | 126.4 | 82.6 | 62.4 | 828.2 |
| **2019** | 31.2 | 56.8 | 211.2 | 18.4 | 26.4 | 163.8 | 34.0 | 121.4 | 78.4 | 41.6 | 37.6 | 3.8 | 824.6 |
| **2020** | *89.6* | *352.6* | 150.4 | *33.2* | 120.2 | 61.4 | *127.4* | 41.4 | 32.0 | *80.0* | 49.0 | *121.2* | *1258.4* |
| **2021** | *99.6* | 105.4 | *411.0* | 27.2 | *52.2* | *98.4* | 32.2 | 54.6 | 51.4 | 45.8 | 121.6 | *87.2* | *1186.6* |
| **2022** | 57.2 | *419.0* | *685.6* | *302.4* | *192.0* | 36.0 | *265.8* | 61.8 | *127.2* | *150.8* | 28.8 | 18.4 | *2345.0* |
| **2023** | *125.6* | *138.2* | *36.2* | *93.6* | 43.0 | *19.6* | *44.0* | *90.8* | 11.0 | 34.4 | 87.2 | 70.2 | *793.8* |
| **2024** | 95.4 | *100.6* | *50.6* | *233.4* | *211.3* | *250.2* | *76.9* | *47.0* | *50.2* | *30.6* | | | |

Quality control: 12.3 Done & acceptable, *12.3* Not completed or unknown

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Monthly Rainfall (millimetres)

## COLLAROY (LONG REEF GOLF CLUB)

Station Number: 066126 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.74°S · Longitude: 151.31°E · Elevation: 2 m

### Statistics for this station calculated over all years of data

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mean** | 114.7 | 139.5 | 149.1 | 111.8 | 106.8 | 138.8 | 72.1 | 62.2 | 67.8 | 64.4 | 85.3 | 68.8 | 1208.5 |
| **Lowest** | 2.5 | 4.2 | 19.5 | 7.6 | 0.0 | 9.2 | 2.6 | 4.0 | 1.2 | 0.8 | 5.0 | 3.3 | 793.8 |
| **5th percentile** | 17.3 | 16.3 | 35.4 | 13.8 | 3.9 | 18.3 | 4.1 | 6.9 | 4.3 | 8.5 | 14.9 | 8.9 | 825.9 |
| **10th percentile** | 24.6 | 18.7 | 39.8 | 17.6 | 4.6 | 34.0 | 14.7 | 12.8 | 9.6 | 12.2 | 24.1 | 25.3 | 828.9 |
| **Median** | 93.9 | 127.9 | 101.0 | 81.6 | 82.9 | 121.2 | 48.3 | 50.7 | 54.0 | 50.4 | 76.4 | 68.1 | 1231.3 |
| **90th percentile** | 234.5 | 276.8 | 284.0 | 284.0 | 223.5 | 274.0 | 170.2 | 116.3 | 122.2 | 138.0 | 169.7 | 106.6 | 1532.0 |
| **95th percentile** | 286.8 | 321.5 | 330.7 | 289.2 | 234.5 | 306.0 | 183.3 | 150.2 | 146.5 | 154.6 | 180.5 | 116.8 | 1578.4 |
| **Highest** | 339.5 | 419.0 | 685.6 | 302.4 | 374.5 | 392.4 | 265.8 | 215.0 | 288.7 | 190.6 | 272.1 | 210.8 | 2345.0 |

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml.

Product code: IDCJAC0001 reference: 0113766207 Created on Thu 31 Oct 2024 16:44:19 PM AEDT

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# APPENDIX J

## REGULATORY CRITERIA



# NEPM 2013 - Schedule B1

# Guideline on Investigation & Health or Ecological Screening Level For Soil

**Table 1A(1) Health investigation levels for soil contaminants**

| Chemical | Health-based investigation levels (mg/kg) | | | |
|---|---|---|---|---|
| | Residential[1] A | Residential[1] B | Recreational[1] C | Commercial/ industrial[1] D |
| **Metals and Inorganics** | | | | |
| Arsenic[2] | 100 | 500 | 300 | 3 000 |
| Beryllium | 60 | 90 | 90 | 500 |
| Boron | 4500 | 40 000 | 20 000 | 300 000 |
| Cadmium | 20 | 150 | 90 | 900 |
| Chromium (VI) | 100 | 500 | 300 | 3600 |
| Cobalt | 100 | 600 | 300 | 4000 |
| Copper | 6000 | 30 000 | 17 000 | 240 000 |
| Lead[3] | 300 | 1200 | 600 | 1 500 |
| Manganese | 3800 | 14 000 | 19 000 | 60 000 |
| Mercury (inorganic)[5] | 40 | 120 | 80 | 730 |
| Methyl mercury[4] | 10 | 30 | 13 | 180 |
| Nickel | 400 | 1200 | 1200 | 6 000 |
| Selenium | 200 | 1400 | 700 | 10 000 |
| Zinc | 7400 | 60 000 | 30 000 | 400 000 |
| Cyanide (free) | 250 | 300 | 240 | 1 500 |
| **Polycyclic Aromatic Hydrocarbons (PAHs)** | | | | |
| Carcinogenic PAHs (as BaP TEQ)[6] | 3 | 4 | 3 | 40 |
| Total PAHs[7] | 300 | 400 | 300 | 4000 |
| **Phenols** | | | | |
| Phenol | 3000 | 45 000 | 40 000 | 240 000 |
| Pentachlorophenol | 100 | 130 | 120 | 660 |
| Cresols | 400 | 4 700 | 4 000 | 25 000 |
| **Organochlorine Pesticides** | | | | |
| DDT+DDE+DDD | 240 | 600 | 400 | 3600 |
| Aldrin and dieldrin | 6 | 10 | 10 | 45 |
| Chlordane | 50 | 90 | 70 | 530 |
| Endosulfan | 270 | 400 | 340 | 2000 |
| Endrin | 10 | 20 | 20 | 100 |
| Heptachlor | 6 | 10 | 10 | 50 |
| HCB | 10 | 15 | 10 | 80 |
| Methoxychlor | 300 | 500 | 400 | 2500 |
| Mirex | 10 | 20 | 20 | 100 |
| Toxaphene | 20 | 30 | 30 | 160 |
| **Herbicides** | | | | |
| 2,4,5-T | 600 | 900 | 800 | 5000 |
| 2,4-D | 900 | 1600 | 1300 | 9000 |



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| Chemical | Health-based investigation levels (mg/kg) | | | |
|---|---|---|---|---|
| | Residential[1] A | Residential[1] B | Recreational[1] C | Commercial/ industrial[1] D |
| MCPA | 600 | 900 | 800 | 5000 |
| MCPB | 600 | 900 | 800 | 5000 |
| Mecoprop | 600 | 900 | 800 | 5000 |
| Picloram | 4500 | 6600 | 5700 | 35000 |
| **Other Pesticides** | | | | |
| Atrazine | 320 | 470 | 400 | 2500 |
| Chlorpyrifos | 160 | 340 | 250 | 2000 |
| Bifenthrin | 600 | 840 | 730 | 4500 |
| **Other Organics** | | | | |
| PCBs[8] | 1 | 1 | 1 | 7 |
| PBDE Flame Retardants (Br1–Br9) | 1 | 2 | 2 | 10 |

**Notes:**

(1) Generic land uses are described in detail in Schedule B7 Section 3

HIL A – Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.

HIL B – Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

HIL C – Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.

HIL D – Commercial/industrial, includes premises such as shops, offices, factories and industrial sites.

(2) Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability may be important and should be considered where appropriate (refer Schedule B7).

(3) Lead: HIL is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HIL D where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate.

(4) Methyl mercury: assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition the reliability and quality of sampling/analysis should be considered.

(5) Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present,

(6) Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their TEFs (potency relative to B(a)P) adopted by CCME 2008 (refer Schedule B7). The B(a)P TEQ is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF, given below, and summing these products.

| PAH species | TEF | PAH species | TEF |
|---|---|---|---|
| Benzo(a)anthracene | 0.1 | Benzo(g,h,i)perylene | 0.01 |
| Benzo(a)pyrene | 1 | Chrysene | 0.01 |



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| | | | |
|---|---|---|---|
| Benzo(b+j)fluoranthene | 0.1 | Dibenz(a,h)anthracene | 1 |
| Benzo(k)fluoranthene | 0.1 | Indeno(1,2,3-c,d)pyrene | 0.1 |

Where the B(a)P occurs in bitumen fragments it is relatively immobile and does not represent a significant health risk.

(7) Total PAHs: HIL is based on the sum of the 16 PAHs most commonly reported for contaminated sites (WHO 1998). The application of the total PAH HIL should consider the presence of carcinogenic PAHs and naphthalene (the most volatile PAH). Carcinogenic PAHs reported in the total PAHs should meet the B(a)P TEQ HIL. Naphthalene reported in the total PAHs should meet the relevant HSL.

(8) PCBs: HIL relates to non-dioxin-like PCBs only. Where a PCB source is known, or suspected, to be present at a site, a site-specific assessment of exposure to all PCBs (including dioxin-like PCBs) should be undertaken.



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**Table 1A(2) Interim soil vapour health investigation levels for volatile organic chlorinated compounds**

| Chemical | Interim soil vapour HIL (mg/m$^3$) | | | |
|---|---|---|---|---|
| | Residential[1] A | Residential[1] B | Recreational[1] C | Commercial / Industrial[1] D |
| TCE | 0.02 | 0.02 | 0.4 | 0.08 |
| 1,1,1-TCA | 60 | 60 | 1200 | 230 |
| PCE | 2 | 2 | 40 | 8 |
| cis-1,2-dichloroethene | 0.08 | 0.08 | 2 | 0.3 |
| Vinyl chloride | 0.03 | 0.03 | 0.5 | 0.1 |

**Notes:**

1. Land use settings are equivalent to those described in Table 1A(1) Footnote 1 and Schedule B7, though secondary school buildings should be assessed using residential 'A/B' for vapour intrusion purposes.
2. Interim HILs for VOCCs are conservative soil vapour concentrations that can be adopted for the purpose of screening sites where further investigation is required on a site-specific basis. They are based on the potential for vapour intrusion using an indoor air-to-soil vapour attenuation factor of 0.1 and an outdoor air-to-soil vapour attenuation factor of 0.05.
3. Application of the interim HILs is based on a measurement of shallow (to 1 m depth) soil vapour (or deeper where the values are to be applied to a future building with a basement) or sub-slab soil vapour.
4. The applicability of the interim HILs needs to be further considered when used for other building types such as homes with a crawl-space and no slab, which may require site-specific assessment.
5. Use of the interim HILs requires comparison with data that has been collected using appropriate methods and meets appropriate data quality requirements.
6. Oral and dermal exposure should be considered on a site-specific basis where direct contact exposure is likely to occur.



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**Table 1A(3) Soil HSLs for vapour intrusion (mg/kg)**

| | HSL A & HSL B Low – high density residential | | | | HSL C recreational / open space | | | | HSL D Commercial / Industrial | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CHEMICAL** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4m** | **4 m+** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m+** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m+** | **Soil saturation concentration (Csat)** |
| **SAND** | | | | | | | | | | | | | |
| **Toluene** | 160 | 220 | 310 | 540 | NL | NL | NL | NL | NL | NL | NL | NL | 560 |
| **Ethylbenzene** | 55 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 64 |
| **Xylenes** | 40 | 60 | 95 | 170 | NL | NL | NL | NL | 230 | NL | NL | NL | 300 |
| **Naphthalene** | 3 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 9 |
| **Benzene** | 0.5 | 0.5 | 0.5 | 0.5 | NL | NL | NL | NL | 3 | 3 | 3 | 3 | 360 |
| **F1**[9] | 45 | 70 | 110 | 200 | NL | NL | NL | NL | 260 | 370 | 630 | NL | 950 |
| **F2**[10] | 110 | 240 | 440 | NL | NL | NL | NL | NL | NL | NL | NL | NL | 560 |
| **SILT** | | | | | | | | | | | | | |
| **Toluene** | 390 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 640 |
| **Ethylbenzene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 69 |



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| | HSL A & HSL B Low – high density residential | | | | HSL C recreational / open space | | | | HSL D Commercial / Industrial | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Xylenes** | 95 | 210 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 330 |
| **Naphthalene** | 4 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 10 |
| **Benzene** | 0.6 | 0.7 | 1 | 2 | NL | NL | NL | NL | 4 | 4 | 6 | 10 | 440 |
| **F1**[9] | 40 | 65 | 100 | 190 | NL | NL | NL | NL | 250 | 360 | 590 | NL | 910 |
| **F2**[10] | 230 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 570 |
| **CLAY** | | | | | | | | | | | | | |
| **Toluene** | 480 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 630 |
| **Ethylbenzene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 68 |
| **Xylenes** | 110 | 310 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 330 |
| **Naphthalene** | 5 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 10 |
| **Benzene** | 0.7 | 1 | 2 | 3 | NL | NL | NL | NL | 4 | 6 | 9 | 20 | 430 |
| **F1**[9] | 50 | 90 | 150 | 290 | NL | NL | NL | NL | 310 | 480 | NL | NL | 850 |
| **F2**[10] | 280 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 560 |

**Notes:**

(1) Land use settings are equivalent to those described in Table 1A(1) Footnote 1 and Schedule B7. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If communal car parks or commercial properties occupy the ground floor, HSL D should be used,

(2) The key limitations of the HSLs should be referred to prior to application and are presented in Friebel and Nadebaum (2011b and 2011d).

(3) Detailed assumptions in the derivation of the HSLs and information on how to apply the HSLs are presented in Friebel and Nadebaum (2011a and 2011b).



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(4) Soil HSLs for vapour inhalation incorporate an adjustment factor of 10 applied to the vapour phase partitioning to reflect the differences observed between theoretical estimates of soil vapour partitioning and field measurements. Refer Friebel & Nadebaum (2011a) for further information.

(5) The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

(6) The HSLs for TPH $C_6$-$C_{10}$ in sandy soil are based on a finite source that depletes in less than seven years, and therefore consideration has been given to use of sub-chronic toxicity values. The $>C_8$-$C_{10}$ aliphatic toxicity has been adjusted to represent sub-chronic exposure, resulting in higher HSLs than if based on chronic toxicity. For further information refer to Section 8.2 and Appendix J in Friebel and Nadebaum (2011a).

(7) The figures in the above table may be multiplied by a factor to account for biodegradation of vapour. A factor of 10 may apply for source depths from 2 m to <4 m or a factor of 100 for source depths of 4 m and deeper. To apply the attenuation factor for vapour degradation, a number of conditions must be satisfied. Firstly the maximum length of the shorter side of the concrete slab and surrounding pavement cannot exceed 15 m, as this would prevent oxygen penetrating to the centre of the slab. Secondly, measurement of oxygen in the subsurface is required to determine the potential for biodegradation. Oxygen must be confirmed to be present at >5% to use these factors.

(8) For soil texture classification undertaken in accord with AS 1726, the classifications of sand, silt and clay may be applied as coarse, fine with liquid limit <50% and fine with liquid limit>50% respectively, as the underlying properties to develop the HSLs may reasonably be selected to be similar. Where there is uncertainty, either a conservative approach may be adopted or laboratory analysis should be carried out.

(9) To obtain F1 subtract the sum of BTEX concentrations from the $C_6$-$C_{10}$ fraction.

(10) To obtain F2 subtract naphthalene from the $>C_{10}$-$C_{16}$ fraction.



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**Table 1A(4) Groundwater HSLs for vapour intrusion (mg/L)**

| | HSL A & HSL B Low – high density residential | | | HSL C recreational / open space | | | HSL D Commercial / industrial | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CHEMICAL** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** | **Solubility limit** |
| SAND | | | | | | | | | | |
| **Toluene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 61 |
| **Ethylbenzene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 3.9 |
| **Xylenes** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 21 |
| **Naphthalene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 0.17 |
| **Benzene** | 0.8 | 0.8 | 0.9 | NL | NL | NL | 5 | 5 | 5 | 59 |
| **F1**[7] | 1 | 1 | 1 | NL | NL | NL | 6 | 6 | 7 | 9.0 |
| **F2**[8] | 1 | 1 | 1 | NL | NL | NL | NL | NL | NL | 3.0 |
| **SILT** | | | | | | | | | | |
| **Toluene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 61 |
| **Ethylbenzene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 3.9 |
| **Xylenes** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 21 |
| **Naphthalene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 0.17 |



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| | HSL A & HSL B Low – high density residential | | | HSL C recreational / open space | | | HSL D Commercial / industrial | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | 4 | 5 | 5 | NL | NL | NL | 30 | 30 | 30 | 59 |
| **F1**[7] | 6 | 6 | 6 | NL | NL | NL | NL | NL | NL | 9.0 |
| **F2**[8] | NL | NL | NL | NL | NL | NL | NL | NL | NL | 3.0 |
| **CLAY** | | | | | | | | | | |
| **Toluene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 61 |
| **Ethylbenzene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 3.9 |
| **Xylenes** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 21 |
| **Naphthalene** | NL | NL | NL | NL | NL | NL | NL | NL | NL | 0.17 |
| **Benzene** | 5 | 5 | 5 | NL | NL | NL | 30 | 30 | 35 | 59 |
| **F1**[7] | NL | NL | NL | NL | NL | NL | NL | NL | NL | 9.0 |
| **F2**[8] | NL | NL | NL | NL | NL | NL | NL | NL | NL | 3.0 |

**Notes:**

(1) Land use settings are equivalent to those described in Table 1A(1) Footnote 1 and Schedule B7. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If communal car parks or commercial properties occupy the ground floor, HSL D should be used,

(2) The key limitations of the HSLs are presented in Friebel and Nadebaum (2011d) and should be referred to prior to application.

(3) Detailed assumptions in the derivation of the HSLs and information on the application of the HSLs are presented in Friebel and Nadebaum (2011a and 2011b).

(4) The solubility limit is defined as the groundwater concentration at which the water cannot dissolve any more of an individual chemical based on a petroleum mixture. The soil vapour that is in equilibrium with the groundwater will be at its maximum. If the derived groundwater HSL exceeds the water solubility limit, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

(5) The figures in the above table may be multiplied by a factor to account for biodegradation of vapour. A factor of 10 may apply for source depths from 2 m to <4 m or a factor of 100 for source depths of 4 m and deeper. To apply the attenuation factor for vapour degradation, a number of conditions must be satisfied. Firstly, the maximum length of the shorter side of the concrete slab



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and surrounding pavement cannot exceed 15 m, as this would prevent oxygen penetrating to the centre of the slab. Secondly, measurement of oxygen in the subsurface is required to determine the potential for biodegradation. Oxygen must be confirmed to be present at >5% to use these factors.

(6) For soil texture classification undertaken in accord with AS 1726, the classifications of sand, silt and clay may be applied as coarse, fine with liquid limit <50% and fine with liquid limit >50% respectively, as the underlying properties to develop the HSLs may reasonably be selected to be similar. Where there is uncertainty, either a conservative approach may be adopted or laboratory analysis should be carried out.

(7) To obtain F1 subtract the sum of BTEX concentrations from the $C_6$-$C_{10}$ fraction.

(8) To obtain F2 subtract naphthalene from the >$C_{10}$-$C_{16}$ fraction.



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**Table 1A(5) Soil vapour HSLs for vapour intrusion (mg/m³)**

| | HSL A & HSL B Low – high density residential | | | | | HSL C recreational / open space | | | | | HSL D Commercial / Industrial | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CHEMICAL** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m to <8 m** | **8 m+** |
| **SAND** | | | | | | | | | | | | | | | |
| **Toluene** | 1300 | 3800 | 7300 | 15 000 | 29 000 | NL | NL | NL | NL | NL | 4800 | 16 000 | 39 000 | 84 000 | NL |
| **Ethylbenzene** | 330 | 1100 | 2200 | 4300 | 8700 | NL | NL | NL | NL | NL | 1300 | 4600 | 11 000 | 25 000 | 53 000 |
| **Xylenes** | 220 | 750 | 1500 | 3000 | 6100 | NL | NL | NL | NL | NL | 840 | 3,200 | 8000 | 18 000 | 37 000 |
| **Naphthalene** | 0.8 | 3 | 6 | 10 | 25 | 410 | NL | NL | NL | NL | 3 | 15 | 35 | 75 | 150 |
| **Benzene** | 1 | 3 | 6 | 10 | 20 | 360 | 2400 | 4700 | 9500 | 19 000 | 4 | 10 | 30 | 65 | 130 |
| **F1**[8] | 180 | 640 | 1,300 | 2600 | 5300 | 86 000 | NL | NL | NL | NL | 680 | 2800 | 7000 | 15 000 | 32 000 |
| **F2**[9] | 130 | 560 | 1200 | 2400 | 4800 | NL | NL | NL | NL | NL | 500 | 2400 | NL | NL | NL |
| **SILT** | | | | | | | | | | | | | | | |
| **Toluene** | 1400 | 14 000 | 32 000 | 69 000 | 140 000 | NL | NL | NL | NL | NL | 5700 | 63 000 | NL | NL | NL |
| **Ethylbenzene** | 380 | 4200 | 9700 | 21 000 | 43 000 | NL | NL | NL | NL | NL | 1500 | 19 000 | 54 000 | NL | NL |
| **Xylenes** | 260 | 2900 | 6800 | 15 000 | 30 000 | NL | NL | NL | NL | NL | 1000 | 13 000 | 38 000 | NL | NL |
| **Naphthalene** | 0.9 | 10 | 25 | 60 | 120 | NL | NL | NL | NL | NL | 4 | 50 | 150 | 350 | 750 |
| **Benzene** | 1 | 10 | 25 | 55 | 110 | 1800 | 12 000 | 24 000 | 48 000 | 97 000 | 4 | 50 | 140 | 320 | 670 |



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| | HSL A & HSL B Low – high density residential | | | | | HSL C recreational / open space | | | | | HSL D Commercial / Industrial | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **F1**[8] | 210 | 2600 | 6000 | 13 000 | 26 000 | NL | NL | NL | NL | NL | 850 | 11 000 | 33 000 | 77 000 | 160 000 |
| **F2**[9] | 160 | 2300 | 5400 | NL | NL | NL | NL | NL | NL | NL | 670 | NL | NL | NL | NL |
| **CLAY** | | | | | | | | | | | | | | | |
| **Toluene** | 1600 | 23 000 | 53 000 | 110 000 | NL | NL | NL | NL | NL | NL | 6500 | 100 000 | NL | NL | NL |
| **Ethylbenzene** | 420 | 6800 | 16 000 | 35 000 | NL | NL | NL | NL | NL | NL | 1800 | 31 000 | NL | NL | NL |
| **Xylenes** | 280 | 4800 | 11 000 | 24 000 | 50 000 | NL | NL | NL | NL | NL | 1200 | 21 000 | NL | NL | NL |
| **Naphthalene** | 1 | 20 | 45 | 95 | 200 | NL | NL | NL | NL | NL | 4 | 85 | 240 | 560 | 1200 |
| **Benzene** | 1 | 15 | 40 | 90 | 180 | 3000 | 20 000 | 40 000 | 81 000 | 160 000 | 5 | 80 | 230 | 530 | 1100 |
| **F1**[8] | 230 | 4200 | 9900 | 21 000 | 44 000 | NL | NL | NL | NL | NL | 1000 | 19 000 | 55 000 | 130 000 | 270 000 |
| **F2**[9] | 180 | 3,800 | NL | NL | NL | NL | NL | NL | NL | NL | 800 | NL | NL | NL | NL |

1. Land use settings are equivalent to those described in Table 1A(1) Footnote 1 and Schedule B7. HSLs for vapour intrusion for high density residential assume residential occupation of the ground floor. If communal car parks or commercial properties occupy the ground floor, HSL D should be used,
2. The key limitations of the HSLs should be referred to prior to application and are presented in Friebel and Nadebaum (2011b and 2011d).
3. Detailed assumptions in the derivation of the HSLs and information on how to apply the HSLs are presented in Friebel and Nadebaum (2011a and 2011b).
4. The maximum possible soil vapour concentrations have been calculated based on vapour pressures of the pure chemicals. Where soil vapour HSLs exceed these values a soil-specific source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.
5. Soil vapour HSLs should be compared with measurements taken as laterally close as possible to the soil or groundwater sources of vapour (i.e. within or above vapour sources). Consideration is required of where the sample is taken, the current condition of the site and the likely future condition of the site. Shallow gas measurements in open space (less than 1 m below ground surface) may be subject to influences of weather conditions and moisture.
6. The figures in the above table may be multiplied by a factor to account for biodegradation of vapour. A factor of 10 may apply for source depths from 2 m to <4 m or a factor of 100 for source depths of 4 m and deeper. To apply the attenuation factor for vapour degradation, a number of conditions must be satisfied. Firstly, the maximum length of the shorter side of the concrete slab and surrounding pavement cannot exceed 15 m, as this would prevent oxygen penetrating to the centre of the slab. Secondly, measurement of oxygen in the subsurface is required to determine the potential for biodegradation. Oxygen must be confirmed to be present at >5% to use these factors.



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7. For soil texture classification undertaken in accord with AS 1726, the classifications of sand, silt and clay may be applied as coarse, fine with liquid limit <50% and fine with liquid limit >50% respectively as the underlying properties to develop the HSLs may reasonably be selected to be similar. Where there is uncertainty, either a conservative approach may be adopted or laboratory analysis should be carried out.
8. To obtain F1 subtract the sum of BTEX concentrations from the $C_6$-$C_{10}$ fraction.
9. To obtain F2 subtract naphthalene from the >$C_{10}$-$C_{16}$ fraction.



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**Table 1B(1) Soil-specific added contaminant limits for aged zinc in soil**

| Zn added contaminant limits (ACL, mg added contaminant/kg) | | | | | | |
|---|---|---|---|---|---|---|
| **Areas of ecological significance** | | | | | | |
| ***pH[a]*** | ***CEC[b] ($cmol_c/kg$)*** | | | | | |
| | ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| ***4.0*** | 15 | 20 | 20 | 20 | 20 | 20 |
| ***4.5*** | 20 | 25 | 25 | 25 | 25 | 25 |
| ***5.0*** | 30 | 40 | 40 | 40 | 40 | 40 |
| ***5.5*** | 40 | 60 | 60 | 60 | 60 | 60 |
| ***6.0*** | 50 | 90 | 90 | 90 | 90 | 90 |
| ***6.5*** | 50 | 90 | 130 | 130 | 130 | 130 |
| ***7.0*** | 50 | 90 | 150 | 190 | 190 | 190 |
| ***7.5*** | 50 | 90 | 150 | 210 | 260 | 280 |
| **Urban residential/public open space[1]** | | | | | | |
| ***pH[a]*** | ***CEC[b] ($cmol_c/kg$)*** | | | | | |
| | ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| ***4.0*** | 70 | 85 | 85 | 85 | 85 | 85 |
| ***4.5*** | 100 | 120 | 120 | 120 | 120 | 120 |
| ***5.0*** | 130 | 180 | 180 | 180 | 180 | 180 |
| ***5.5*** | 180 | 270 | 270 | 270 | 270 | 270 |
| ***6.0*** | 230 | 400 | 400 | 400 | 400 | 400 |
| ***6.5*** | 230 | 400 | 590 | 590 | 590 | 590 |
| ***7.0*** | 230 | 400 | 700 | 880 | 880 | 880 |
| ***7.5*** | 230 | 400 | 700 | 960 | 1200 | 1300 |
| **Commercial/industrial** | | | | | | |
| ***pH[a]*** | ***CEC[b] ($cmol_c/kg$)*** | | | | | |
| | ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| ***4.0*** | 110 | 130 | 130 | 130 | 130 | 130 |
| ***4.5*** | 150 | 190 | 190 | 190 | 190 | 190 |
| ***5.0*** | 210 | 290 | 290 | 290 | 290 | 290 |
| ***5.5*** | 280 | 420 | 420 | 420 | 420 | 420 |
| ***6.0*** | 360 | 620 | 620 | 620 | 620 | 620 |
| ***6.5*** | 360 | 620 | 920 | 920 | 920 | 920 |
| ***7.0*** | 360 | 620 | 1100 | 1400 | 1400 | 1400 |
| ***7.5*** | 360 | 620 | 1100 | 1500 | 1900 | 2000 |

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. The EIL is calculated from summing the ACL and the ABC.

a = pH measured using the $CaCl_2$ method (Rayment & Higginson 1992).

b = CEC measured using the silver thiourea method (Chabra et al. 1972).

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**Table 1B(2) Soil-specific added contaminant limits for aged copper in soils**

| Cu added contaminant limits (ACL, mg added contaminant/kg) | | | | | |
|---|---|---|---|---|---|
| **Areas of ecological significance** | | | | | |
| ***CEC ($cmol_c/kg$)[a] based*** | | | | | |
| ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| 30 | 65 | 70 | 70 | 75 | 80 |
| ***pH[b] based*** | | | | | |
| ***4.5*** | ***5.5*** | ***6*** | ***6.5*** | ***7.5*** | ***8.0*** |
| 20 | 45 | 65 | 90 | 190 | 270 |
| **Urban residential/public open space[1]** | | | | | |
| ***CEC ($cmol_c/kg$)[a] based*** | | | | | |
| ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| 95 | 190 | 210 | 220 | 220 | 230 |
| ***pH[b] based*** | | | | | |
| ***4.5*** | ***5.5*** | ***6*** | ***6.5*** | ***7.5*** | ***8.0*** |
| 60 | 130 | 190 | 280 | 560 | 800 |
| **Commercial/industrial** | | | | | |
| ***CEC ($cmol_c/kg$)[a] based*** | | | | | |
| ***5*** | ***10*** | ***20*** | ***30*** | ***40*** | ***60*** |
| 140 | 280 | 300 | 320 | 330 | 340 |
| ***pH[b] based*** | | | | | |
| ***4.5*** | ***5.5*** | ***6*** | ***6.5*** | ***7.5*** | ***8.0*** |
| 85 | 190 | 280 | 400 | 830 | 1200 |

**Notes:**

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. The lower of the CEC or the pH-based ACLs for the land use and soil conditions is the ACL to be used.
3. Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
4. The EIL is calculated from summing the ACL and the ABC.

a = CEC measured using the silver thiourea method (Chabra et al. 1972).

b = pH measured using the $CaCl_2$ method (Rayment & Higginson 1992).

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**Table 1B(3) Soil-specific added contaminant limits for aged chromium III and nickel in soil**

| CHEMICAL | Clay content (% clay) | Added contaminant limits (mg added contaminant/kg) for various land uses | | |
|---|---|---|---|---|
| | | Areas of ecological significance | Urban residential and public open space | Commercial and industrial |
| Chromium III | *1* | 60 | 190 | 310 |
| | *2.5* | 80 | 250 | 420 |
| | *5* | 100 | 320 | 530 |
| | *≥10* | 130 | 400 | 660 |
| Nickel | CEC[a] ($cmol_c/kg$) | Areas of ecological significance | Urban residential and public open space[1] | Commercial and industrial |
| | *5* | 5 | 30 | 55 |
| | *10* | 30 | 170 | 290 |
| | *20* | 45 | 270 | 460 |
| | *30* | 60 | 350 | 600 |
| | *40* | 70 | 420 | 730 |
| | *60* | 95 | 560 | 960 |

**Notes:**

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. The EIL is calculated from summing the ACL and the ABC.

a = CEC measured using the silver thiourea method (Chabra et al. 1972).

**Table 1B(4) Generic added contaminant limits for lead in soils irrespective of their physicochemical properties**

| | Pb added contaminant limit (ACL, mg added contaminant/kg) for various land uses | | |
|---|---|---|---|
| CHEMICAL | Areas of ecological significance | Urban residential and public open space[1] | Commercial and industrial |
| Lead | 470 | 1100 | 1800 |

**Notes:**

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values are applicable to lead contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. The EIL is calculated from summing the ACL and the ABC.

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**Table 1B(5) Generic EILs for aged As, fresh DDT and fresh naphthalene in soils irrespective of their physicochemical properties**

| | Ecological Investigation Levels (mg total contaminant/kg) | | |
|---|---|---|---|
| CHEMICAL | Areas of ecological significance | Urban residential and public open space[1] | Commercial and industrial |
| Arsenic[2] | 40 | 100 | 160 |
| DDT[3] | 3 | 180 | 640 |
| Naphthalene[3] | 10 | 170 | 370 |

**Notes:**

1. Urban residential/public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values are applicable to arsenic contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. Insufficient data was available to calculate aged values for DDT and naphthalene, consequently the values for fresh contamination should be used.
4. Insufficient data was available to calculate ACLs for As, DDT and naphthalene. The EIL should be taken directly from Table 1B(5).

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**Table 1B(6) ESLs for TPH fractions F1 – F4, BTEX and benzo(a)pyrene in soil**

| CHEMICAL | Soil texture | ESLs (mg/kg dry soil) | | |
|---|---|---|---|---|
| | | Areas of ecological significance | Urban residential and public open space | Commercial and industrial |
| **F1** $C_6$-$C_{10}$ | *Coarse/ Fine* | 125* | 180* | 215* |
| **F2** >$C_{10}$-$C_{16}$ | | 25* | 120* | 170* |
| **F3** >$C_{16}$-$C_{34}$ | *Coarse* | - | 300 | 1700 |
| | *Fine* | - | 1300 | 2500 |
| **F4** >$C_{34}$-$C_{40}$ | *Coarse* | - | 2800 | 3300 |
| | *Fine* | - | 5600 | 6600 |
| **Benzene** | *Coarse* | 8 | 50 | 75 |
| | *Fine* | 8 | 65 | 95 |
| **Toluene** | *Coarse* | 10 | 85 | 135 |
| | *Fine* | 65 | 105 | 135 |
| **Ethylbenzene** | *Coarse* | 1.5 | 70 | 165 |
| | *Fine* | 40 | 125 | 185 |
| **Xylenes** | *Coarse* | 10 | 105 | 180 |
| | *Fine* | 1.6 | 45 | 95 |
| **Benzo(a)pyrene** | *Coarse* | 0.7 | 0.7 | 1.4 |
| | *Fine* | 0.7 | 0.7 | 1.4 |

**Notes:**

(1) ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

(2) '-' indicates that insufficient data was available to derive a value.

(3) To obtain F1, subtract the sum of BTEX concentrations from $C_6$-$C_{10}$ fraction.

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**Table 1 B(7) Management Limits for TPH fractions F1–F4 in soil**

| TPH fraction | Soil texture | Management Limits[1] (mg/kg dry soil) | |
|---|---|---|---|
| | | Residential, parkland and public open space | Commercial and industrial |
| **F1[2] $C_6$- $C_{10}$** | *Coarse* | 700 | 700 |
| | *Fine* | 800 | 800 |
| **F2[2] >$C_{10}$-$C_{16}$** | *Coarse* | 1000 | 1000 |
| | *Fine* | 1000 | 1000 |
| **F3 >$C_{16}$-$C_{34}$** | *Coarse* | 2500 | 3500 |
| | *Fine* | 3500 | 5000 |
| **F4 >$C_{34}$-$C_{40}$** | *Coarse* | 10 000 | 10 000 |
| | *Fine* | 10 000 | 10 000 |

[1] Management limits are applied after consideration of relevant ESLs and HSLs

[2] Separate management limits for BTEX and naphthalene are not available hence these should not be subtracted from the relevant fractions to obtain F1 and F2.

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Table 4

SOIL HEALTH SCREENING LEVELS FOR DIRECT CONTACT (mg/kg)[a,b]

| Chemical | HSL-A Residential (Low Density) | HSL-B Residential (High **Density**) | HSL-C Recreational Open Space | HSL-D Commercial / Industrial |
|---|---|---|---|---|
| Toluene | 14,000 | 21,000 | 18,000 | 99,000 |
| Ethylbenzene | 4,500 | 5,900 | 5,300 | 27,000 |
| Xylenes | 12,000 | 17,000 | 15,000 | 81,000 |
| Naphthalene | 1,400 | 2,200 | 1,900 | 11,000 |
| Benzene | 100 | 140 | 120 | 430 |
| C6-C10 | 4,400 | 5,600 | 5,100 | 26,000 |
| >C10-C16 | 3,300 | 4,200 | 3,800 | 20,000 |
| >C16-C34 | 4,500 | 5,800 | 5,300 | 27,000 |
| >C34-C40 | 6,300 | 8,100 | 7,400 | 38,000 |

Note:

(a) Derived assumptions used in the derivation of the HSLs and information on how to apply the HSLs are presented in:

- Frebel E & Nadebaum P 2011. Health screening levels for petroleum hydrocarbons in soil and groundwater Part 1: Technical development document, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia
- Frebel E & Nadebaum P 2011. Health screening levels for petroleum hydrocarbons in soil and groundwater Part 2: Application document, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia

(b) The key limitations in the development of the HSLs should be referred to prior to application. These are presented in the text of the summary document and the HSL application checklist in Appendix A of the Application Document (Frebel & Nadebaum 2011 – Part 2)

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Table 7: Health screening levels for asbestos contamination in soil

| Form of Asbestos | Health Screening Level (w/w) | | | |
|---|---|---|---|---|
| | Residential A[1] | Residential B[2] | **Recreational C[3]** | Commercial/ Industrial D[4] |
| Bonded ACM | 0.01% | 0.04% | **0.02%** | 0.05% |
| FA & AF (friable asbestos & fines) | **0.001%** | | | |
| All forms of asbestos | **No visible asbestos for surface soil** | | | |

Notes:

1. Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
2. Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
3. Residential C includes public open space such as parks, playgrounds, playing fields (e.g. Ovals), secondary schools and unpaved footpaths.
4. Commercial/Industrial D includes premises such as shops, offices, factories and industrial sites.

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# PFAS - Environmental Guideline Values

Source: PFAS National Environmental Management Plan Version 2.0 – January 2020

# PFAS ENVIRONMENTAL GUIDELINE VALUES

## 1. Human Health Guideline Values

The national methodologies used by health agencies in deriving the values in Table 1 include a level of conservatism in the drinking water and recreational water health-based guideline values. The methods assume only a minor portion (10%) of the TDI is allocated to this source. Therefore, 90% of intake is attributed to other exposure pathways, which means that exceeding these values does not constitute a risk if other pathways are controlled.

The recreational water quality values have been updated from the values published in the NEMP 1.0 and are based on revised numbers derived by NHMRC (2019). The revised numbers are based on changes in the assumption for the frequency and likelihood of exposure during recreational activities.

**Table 1. Human health guideline values developed by health regulators**

| Sum of PFOS and PFHxS | PFOA | Description | Comments and source |
|---|---|---|---|
| 0.02 µg/kg$_{bw}$/day | 0.16 µg/kg$_{bw}$/day | Tolerable daily intake (TDI) | FSANZ 2017 |
| 0.07 µg/L | 0.56 µg/L | Drinking water quality guideline value | Australian Government Department of Health 2019 |
| 2 µg/L | 10 µg/L | Recreational water quality guideline value* | NHMRC 2019 |

Notes: bw = body weight, µg = micrograms.

Where the guideline values refer to the sum of PFOS and PFHxS, this includes PFOS only, PFHxS only, and the sum of the two.

*NHMRC (2019) notes that people's use of recreational water is not the same, given Australia's climate and geography. Some recreational water resources may be used less frequently than the assumed guidelines (150 days/year), and (in rare cases) some may be used more frequently. In such cases more locally-appropriate event frequency based recreational guidelines can be considered in consultation with the state and regulatory health regulator.

Source: PFAS National Environmental Management Plan Version 2.0 – January 2020

## 1.1 Human health investigation levels for soil

**Table 2. Human health investigation levels for soil**

| Sum of PFOS and PFHxS | PFOA | Land use | Comments and source |
|---|---|---|---|
| 0.01 mg/kg | 0.1 mg/kg | Residential with garden/accessible soil (HIL A) | Assumes home-grown produce provides up to 10% of fruit and vegetable intake (does not account for consumption of any eggs from home poultry, nor of milk or meat from stock on the premises). Also includes children's day care centres, preschools and primary schools.<br>The HILs were derived using the methodology consistent with assumptions set out in the ASC NEPM for HIL A.<br>Note: If home-grown produce provides more than the 10% of fruit and vegetable intake assumed in the ASC NEPM generic example, a site-specific risk assessment is required. As an example, if home grown produce provides up to 50% of fruit and vegetable intake, the screening value would be 0.002 mg/kg for the sum of PFOS and PFHxS, and 0.02 mg/kg for PFOA. |
| 2 mg/kg | 20 mg/kg | Residential with minimal opportunities for soil access (HIL B) | Assumes no potential use of soil for consumption of home-grown produce. Includes dwellings with fully and permanently paved yard space such as high rise-buildings and flats.<br>These were derived using the methodology consistent with assumptions set out in the ASC NEPM for HIL B. |
| 1 mg/kg | 10 mg/kg | Public open space (HIL C) | Relevant for public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools (except for soil used for agricultural studies) and footpaths. Excludes undeveloped public open space (such as urban bushland and reserves), which should be subject to a site-specific assessment where appropriate.<br>These were derived using the methodology consistent with assumptions set out in the ASC NEPM for HIL C. |
| 20 mg/kg | 50 mg/kg | Industrial/ commercial (HIL D) | Assumes 8 hours is spent indoors and 1 hour spent outdoors at a site such as a shop, office, factory or industrial site. If the typical exposure for a site is predominantly outdoors with significant earthen areas, recalculation of a site-specific value is recommended.<br>These were derived using the methodology consistent with assumptions set out in the ASC NEPM for HIL D.<br>Note: the industrial/commercial direct exposure criterion for PFOA (including its salts and related compounds) has been set as 50 mg/kg in anticipation of the Stockholm Convention low content limit of 50 mg/kg. |
| Note: Where the guideline values refer to the sum of PFOS and PFHxS, this includes PFOS only, PFHxS only, and the sum of the two. | | | |

Source: PFAS National Environmental Management Plan Version 2.0 – January 2020

## 2. Ecological guideline values

The ecological guideline values are used to assess and investigate potential risks to aquatic and terrestrial ecosystems.

### 2.1 Ecological soil guidelines values

**Table 3. Ecological guideline values for soil**

| Exposure scenario | PFOS | PFOA | Land use | Comments and source |
|---|---|---|---|---|
| Ecological direct exposure | 1 mg/kg | 10 mg/kg | All land uses | Future work may be undertaken to review available soil guideline values proposed by Australian research and industry organisations<br>The human health screening value for public open space is used as an interim value (see Table 2 above). |
| Ecological indirect exposure | 0.01 mg/kg | | All land uses | The guideline value is based on dietary exposure of a secondary consumer as the most sensitive exposure pathway assessed. This value may not be protective of specific animals relevant to Australia, including predatory animals such as quolls, antechinus and reptiles. For intensively developed sites with no secondary consumers and minimal potential for indirect ecological exposure, a higher criterion of up to 0.14 mg/kg may be appropriate as outlined in the accompanying text in section 8.2.1. |

Source: PFAS National Environmental Management Plan Version 2.0 – January 2020

## 2.2 Ecological water quality guideline values

**Table 5 Ecological water quality guideline values developed by water regulators**

| Exposure scenario | PFOS | PFOA | Exposure scenario | Comments and source |
|---|---|---|---|---|
| Freshwater | 0.00023 µg/L | 19 µg/L | 99% species protection - high conservation value systems | Australian and New Zealand Guidelines for Fresh and Marine Water Quality - technical draft default guideline values for PFOS and PFOA.<br>Note 1: The 99% species protection level for PFOS is close to the level of detection. Agencies may wish to apply a 'detect' threshold in such circumstances rather than a quantified measurement.<br>Note 2: The draft guidelines do not account for effects which result from the biomagnification of toxicants in air-breathing animals or in animals which prey on aquatic organisms.<br>Note 3: The WQGs advise that the 99% level of protection be used for slightly to moderately disturbed systems. This approach is generally adopted for chemicals that bioaccumulate and biomagnify in wildlife. Regulators may specify or environmental legislation may prescribe the level of species protection required, rather than allowing for case-by-case assessments. |
| | 0.13 µg/L | 220 µg/L | 95% species protection - slightly to moderately disturbed systems | |
| | 2 µg/L | 632 µg/L | 90% species protection - highly disturbed systems | |
| | 31 µg/L | 1824 µg/L | 80% species protection - highly disturbed systems | |
| Interim marine | 0.00023 µg/L | 19 µg/L | 99% species protection - high conservation value systems | As above.<br>Freshwater values are to be used on an interim basis until final marine guideline values can be set using the nationally-agreed process under the Australian and New Zealand Guidelines for Fresh and Marine Water Quality.<br>Note 1: The WQG advise that in the case of estuaries, the most stringent of freshwater and marine criteria apply, taking account of any available salinity correction.<br>Note 2: Marine guideline values developed by CRC CARE are under consideration through the nationally-agreed water quality guideline development process. |
| | 0.13 µg/L | 220 µg/L | 95% species protection - slightly to moderately disturbed systems | |
| | 2 µg/L | 632 µg/L | 90% species protection - highly disturbed systems | |
| | 31 µg/L | 1824 µg/L | 80% species protection - highly disturbed systems | |

Source: PFAS National Environmental Management Plan Version 2.0 – January 2020

# NEPM 2013 - Schedule B1

# Guideline - Groundwater Investigation Levels

**Table 1C Groundwater Investigation Levels (GILs)**

| Substance | | Groundwater Investigation Levels | | |
|---|---|---|---|---|
| | | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | | (µg/L) | (µg/L) | (mg/L) |
| **Metals and Metalloids** | | | | |
| Aluminium, Al pH>6.5 | | 55 | - | - |
| Antimony | | - | - | 0.003 |
| Arsenic | | 24 as As(III)<br>13 as As(V) | - | 0.01 |
| Barium | | - | - | 2 |
| Beryllium | | - | - | 0.06 |
| Boron | | 370[C] | - | 4 |
| Cadmium | H | 0.2 | 0.7[D] | 0.002 |
| Chromium, Cr (III) | H | - | 27 | - |
| Chromium, Cr (VI) | | 1[C] | 4.4 | 0.05 |
| Cobalt | | - | 1 | - |
| Copper | H | 1.4 | 1.3 | 2 |
| Iron, (Total) | | - | - | - |
| Lead | H | 3.4 | 4.4 | 0.01 |
| Manganese | | 1900[C] | - | 0.5 |
| Mercury (Total) | | 0.06[D] | 0.1[D] | 0.001 |
| Molybdenum | | - | - | 0.05 |
| Nickel | H | 11 | 7 | 0.02 |
| Selenium (Total) | | 5[D] | - | 0.01 |
| Silver | | 0.05 | 1.4 | 0.1 |
| Tributyl tin (as Sn) | | - | 0.006[C] | - |
| Tributyl tin oxide | | - | - | 0.001 |
| Uranium | | - | - | 0.017 |
| Vanadium | | - | 100 | - |
| Zinc | H | 8[C] | 15[C] | - |
| **Non-metallic Inorganics** | | | | |
| Ammonia[E] (as $NH_3$-N at pH 8) | | 900[C] | 910 | - |
| Bromate | | - | - | 0.02 |
| Chloride | | - | - | - |
| Cyanide (as un-ionised Cn) | | 7 | 4 | 0.08 |
| Fluoride | | - | - | 1.5 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| Hydrogen sulphide (un-ionised $H_2S$ measured as S) | 1 | - | - |
| Iodide | - | - | 0.5 |
| Nitrate (as $NO_3$) | refer to guideline | refer to guideline | 50 |
| Nitrite (as $NO_2$) | refer to guideline | refer to guideline | 3 |
| Nitrogen | refer to guideline | refer to guideline | - |
| Phosphorus | refer to guideline | refer to guideline | - |
| Sulphate (as $SO_4$) | - | - | 500 |
| **Organic alchohols/other organics** | | | |
| Ethanol | 1400 | - | - |
| Ethylenediamine tetra-acetic acid (EDTA) | - | - | 0.25 |
| Formaldehyde | - | - | 0.5 |
| Nitrilotriacetic acid | - | - | 0.2 |
| **Anilines** | | | |
| Aniline | 8 | - | - |
| 2,4-Dichloroaniline | 7 | - | - |
| 3,4-Dichloroaniline | 3 | 150 | - |
| **Chlorinated Alkanes** | | | |
| Dichloromethane | - | - | 0.004 |
| Trihalomethanes (total) | - | - | 0.25 |
| Tetrachloromethane (carbon tetrachloride) | - | - | 0.003 |
| 1,2-Dichloroethane | - | - | 0.003 |
| 1,1,2-Trichloroethane | 6500 | 1900 | - |
| Hexachloroethane | 290[D] | - | - |
| **Chlorinated Alkenes** | | | |
| Chloroethene (vinyl chloride) | - | - | 0.0003 |
| 1,1-Dichloroethene | - | - | 0.03 |
| 1,2-Dichoroethene | - | - | 0.06 |
| Tetrachloroethene (PCE) (Perchloroethene) | - | - | 0.05 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| **Chlorinated Benzenes** | | | |
| Chlorobenzene | - | - | 0.3 |
| 1,2- Dichlorobenzene | 160 | - | 1.5 |
| 1,3- Dichlorobenzene | 260 | - | - |
| 1,4- Dichlorobenzene | 60 | - | 0.04 |
| 1,2,3- Trichlorobenzene | 3[D] | - | 0.03 for individual or total trichlorobenzenes |
| 1,2,4- Trichlorobenzene | 85[D] | 20[D] | |
| 1,3,5-Trichlorobenzene | - | - | |
| **Polychlorinated Biphenyls (PCBs)** | | | |
| Aroclor 1242 | 0.3[D] | - | - |
| Aroclor 1254 | 0.01[D] | - | - |
| **Other Chlorinated Compounds** | | | |
| Epichlorohydrin | - | - | 0.1 |
| Hexachlorobutadiene | - | - | 0.0007 |
| Monochloramine | - | - | 3 |
| **Monocyclic Aromatic Hydrocarbons** | | | |
| Benzene | 950 | 500[C] | 0.001 |
| Toluene | - | - | 0.8 |
| Ethylbenzene | - | - | 0.3 |
| Xylenes | 350 (as o-xylene) 200 (as p-xylene) | - | 0.6 |
| Styrene (Vinyl benzene) | - | - | 0.03 |
| **Polycyclic Aromatic Hydrocarbons (PAHs)** | | | |
| Naphthalene | 16 | 50[C] | - |
| Benzo[a]pyrene | - | - | 0.00001 |
| **Phenols** | | | |
| Phenol | 320 | 400 | - |
| 2-Chlorophenol | 340[C] | - | 0.3 |
| 4-Chlorophenol | 220 | - | - |
| 2,4-Dichlorophenol | 120 | - | 0.2 |
| 2,4,6-Trichlorophenol | 3[D] | - | 0.02 |
| 2,3,4,6-Tetrachlorophenol | 10[D] | - | - |
| Pentachlorophenol | 3.6[D] | 11[D] | 0.01 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| 2,4-Dinitrophenol | 45 | - | - |
| **Phthalates** | | | |
| Dimethylphthalate | 3700 | - | - |
| Diethylphthalate | 1000 | - | - |
| Dibutylphthalate | 10[D] | - | - |
| Di(2-ethylhexyl) phthalate | - | - | 0.01 |
| **Pesticides** | | | |
| Acephate | - | - | 0.008 |
| Aldicarb | - | - | 0.004 |
| Aldrin plus Dieldrin | - | - | 0.0003 |
| Ametryn | - | - | 0.07 |
| Amitraz | - | - | 0.009 |
| Amitrole | - | - | 0.0009 |
| Asulam | - | - | 0.07 |
| Atrazine | 13 | - | 0.02 |
| Azinphos-methyl | - | - | 0.03 |
| Benomyl | - | - | 0.09 |
| Bentazone | - | - | 0.4 |
| Bioresmethrin | - | - | 0.1 |
| Bromacil | - | - | 0.4 |
| Bromoxynil | - | - | 0.01 |
| Captan | - | - | 0.4 |
| Carbaryl | - | - | 0.03 |
| Carbendazim (Thiophanate-methyl) | - | - | 0.09 |
| Carbofuran | 0.06 | - | 0.01 |
| Carboxin | - | - | 0.3 |
| Carfentrazone-ethyl | - | - | 0.1 |
| Chlorantraniliprole | - | - | 6 |
| Chlordane | 0.03[D] | - | 0.002 |
| Chlorfenvinphos | - | - | 0.002 |
| Chlorothalonil | - | - | 0.05 |
| Chlorpyrifos | 0.01[D] | 0.009[D] | 0.01 |
| Chlorsulfuron | - | - | 0.2 |
| Clopyralid | - | - | 2 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| Cyfluthrin, Beta-cyfluthrin | - | - | 0.05 |
| Cypermethrin isomers | - | - | 0.2 |
| Cyprodinil | - | - | 0.09 |
| 1,3-Dichloropropene | - | - | 0.1 |
| 2,2-DPA | - | - | 0.5 |
| 2,4-D [2,4-dichlorophenoxy acetic acid] | 280 | - | 0.03 |
| DDT | 0.006[D] | - | 0.009 |
| Deltramethrin | - | - | 0.04 |
| Diazinon | 0.01 | - | 0.004 |
| Dicamba | - | - | 0.1 |
| Dichloroprop | - | - | 0.1 |
| Dichlorvos | - | - | 0.005 |
| Dicofol | - | - | 0.004 |
| Diclofop-methyl | - | - | 0.005 |
| Dieldrin plus Aldrin | - | - | 0.0003 |
| Diflubenzuron | - | - | 0.07 |
| Dimethoate | 0.15 | - | 0.007 |
| Diquat | 1.4 | - | 0.007 |
| Disulfoton | - | - | 0.004 |
| Diuron | - | - | 0.02 |
| Endosulfan | 0.03[D] | 0.005[D] | 0.02 |
| Endothal | - | - | 0.1 |
| Endrin | 0.01[D] | 0.004[D] | - |
| EPTC | - | - | 0.3 |
| Esfenvalerate | - | - | 0.03 |
| Ethion | - | - | 0.004 |
| Ethoprophos | - | - | 0.001 |
| Etridiazole | - | - | 0.1 |
| Fenamiphos | - | - | 0.0005 |
| Fenarimol | - | - | 0.04 |
| Fenitrothion | 0.2 | - | 0.007 |
| Fenthion | - | - | 0.007 |
| Fenvalerate | - | - | 0.06 |
| Fipronil | - | - | 0.0007 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| Flamprop-methyl | - | - | 0.004 |
| Fluometuron | - | - | 0.07 |
| Flupropanate | - | - | 0.009 |
| Glyphosate | 370 | - | 1 |
| Haloxyfop | - | - | 0.001 |
| Heptachlor | 0.01[D] | - | - |
| Heptachlor epoxide | - | - | 0.0003 |
| Hexazinone | - | - | 0.4 |
| Imazapyr | - | - | 9 |
| Iprodione | - | - | 0.1 |
| Lindane (γ-HCH) | 0.2 | - | 0.01 |
| Malathion | 0.05 | - | 0.07 |
| Mancozeb (as ETU, ethylene thiourea) | - | - | 0.009 |
| MCPA | - | - | 0.04 |
| Metaldehyde | - | - | 0.02 |
| Metham (as methylisothiocyanate, MITC) | - | - | 0.001 |
| Methidathion | - | - | 0.006 |
| Methiocarb | - | - | 0.007 |
| Methomyl | 3.5 | | 0.02 |
| Methyl bromide | - | - | 0.001 |
| Metiram (as ETU, ethylene thiourea) | - | - | 0.009 |
| Metolachlor/s–Metolachlor | - | - | 0.30 |
| Metribuzin | - | - | 0.07 |
| Metsulfuron-methyl | - | - | 0.04 |
| Mevinphos | - | - | 0.006 |
| Molinate | 3.4 | - | 0.004 |
| Napropamide | - | - | 0.4 |
| Nicarbazin | - | - | 1 |
| Norflurazon | - | - | 0.05 |
| Omethoate | - | - | 0.001 |
| Oryzalin | - | - | 0.4 |
| Oxamyl | - | - | 0.007 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| Paraquat | - | - | 0.02 |
| Parathion | 0.004[C] | - | 0.02 |
| Parathion methyl | - | - | 0.0007 |
| Pebulate | - | - | 0.03 |
| Pendimethalin | - | - | 0.4 |
| Pentachlorophenol | - | - | 0.01 |
| Permethrin | - | - | 0.2 |
| Picloram | - | - | 0.30 |
| Piperonyl butoxide | - | - | 0.6 |
| Pirimicarb | - | - | 0.007 |
| Pirimiphos methyl | - | - | 0.09 |
| Polihexanide | - | - | 0.7 |
| Profenofos | - | - | 0.0003 |
| Propachlor | - | - | 0.07 |
| Propanil | - | - | 0.7 |
| Propargite | - | - | 0.007 |
| Proparzine | - | - | 0.05 |
| Propiconazole | - | - | 0.1 |
| Propyzamide | - | - | 0.07 |
| Pyrasulfatole | - | - | 0.04 |
| Pyrazophos | - | - | 0.02 |
| Pyroxsulam | - | - | 4 |
| Quintozene | - | - | 0.03 |
| Simazine | 3.2 | - | 0.02 |
| Spirotetramat | - | - | 0.2 |
| Sulprofos | - | - | 0.01 |
| 2,4,5-T | 36 | - | 0.1 |
| Tebuthiuron | 2.2 | - | - |
| Temephos | - | 0.05[D] | 0.4 |
| Terbacil | - | - | 0.2 |
| Terbufos | - | - | 0.0009 |
| Terbuthylazine | - | - | 0.01 |
| Terbutryn | - | - | 0.4 |
| Thiobencarb | 2.8 | - | 0.04 |
| Thiometon | - | - | 0.004 |

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| Substance | Groundwater Investigation Levels | | |
|---|---|---|---|
| | Fresh Waters[A] | Marine Waters[A] | Drinking Water[B] |
| | (µg/L) | (µg/L) | (mg/L) |
| Thiram | 0.01 | - | 0.007 |
| Toltrazuril | - | - | 0.004 |
| Toxafene | 0.1 [D] | - | - |
| Triadimefon | - | - | 0.09 |
| Trichlorfon | - | - | 0.007 |
| Triclopyr | - | - | 0.02 |
| Trifluralin | 2.6[D] | - | 0.09 |
| Vernolate | - | - | 0.04 |
| **Surfactants** | | | |
| Linear alkylbenzene sulfonates (LAS) | 280 | - | - |
| Alcohol ethoxylated sulfate (AES) | 650 | - | - |
| Alcohol ethoxylated surfactants (AE) | 140 | - | - |

A Investigation levels apply to typical slightly-moderately disturbed systems. See ANZECC & ARMCANZ (2000) for guidance on applying these levels to different ecosystem conditions.

B Investigation levels are taken from the health values of the Australian Drinking Water Guidelines (NHMRC 2011).

C Figure may not protect key species from chronic toxicity, refer to ANZECC & ARMCANZ (2000) for further guidance.

D Chemical for which possible bioaccumulation and secondary poisoning effects should be considered, refer to ANZECC & ARMCANZ (2000) for further guidance.

E For changes in GIL with pH refer to ANZECC & ARMCANZ (2000) for further guidance.

H Values have been calculated using a hardness of 30 mg/L $CaCO_3$ refer to ANZECC & ARMCANZ (2000) for further guidance on recalculating for site-specific hardness.

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# US EPA Regional Screening Level Summary Table

November 2020

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 1.2E-03 | O | | | | | 1 | 0.1 | | Acephate | 30560-19-1 | 7.6E+01 | n | 9.8E+02 | n | | | | | 2.4E+01 | n | | 5.3E-03 | n | |
| | | 2.2E-06 | I | | | 9.0E-03 | I | V | | 1 | | 1.1E+05 | Acetaldehyde | 75-07-0 | 1.1E+01 | c** | 4.9E+01 | c** | 1.3E+00 | c** | 5.6E+00 | c** | 2.6E+00 | c** | | 5.2E-04 | c** | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Acetochlor | 34256-82-1 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.5E+02 | n | | 2.8E-01 | n | |
| | | | | 9.0E-01 | I | 3.1E+01 | A | V | | 1 | | 1.1E+05 | Acetone | 67-64-1 | 6.1E+04 | n | 6.7E+05 | nms | 3.2E+04 | n | 1.4E+05 | n | 1.4E+04 | n | | 2.9E+00 | n | |
| | | | | | | 2.0E-03 | X | | | 1 | 0.1 | | Acetone Cyanohydrin | 75-86-5 | 2.8E+06 | nm | 1.2E+07 | nm | 2.1E+00 | n | 8.8E+00 | n | | | | | | |
| | | | | | | 6.0E-02 | I | V | | 1 | | 1.3E+05 | Acetonitrile | 75-05-8 | 8.1E+02 | n | 3.4E+03 | n | 6.3E+01 | n | 2.6E+02 | n | 1.3E+02 | n | | 2.6E-02 | n | |
| | | | | 1.0E-01 | I | | | V | | 1 | | 2.5E+03 | Acetophenone | 98-86-2 | 7.8E+03 | ns | 1.2E+05 | nms | | | | | 1.9E+03 | n | | 5.8E-01 | n | |
| 3.8E+00 | C | 1.3E-03 | C | | | | | | | 1 | 0.1 | | Acetylaminofluorene, 2- | 53-96-3 | 1.4E-01 | c | 6.0E-01 | c | 2.2E-03 | c | 9.4E-03 | c | 1.6E-02 | c | | 7.5E-05 | c | |
| | | | | 5.0E-04 | I | 2.0E-05 | I | V | | 1 | | 2.3E+04 | Acrolein | 107-02-8 | 1.4E-01 | n | 6.0E-01 | n | 2.1E-02 | n | 8.8E-02 | n | 4.2E-02 | n | | 8.4E-06 | n | |
| 5.0E-01 | I | 1.0E-04 | I | 2.0E-03 | I | 6.0E-03 | I | | M | 1 | 0.1 | | Acrylamide | 79-06-1 | 2.4E-01 | c | 4.6E+00 | c | 1.0E-02 | c | 1.2E-01 | c | 5.0E-02 | c | | 1.1E-05 | c | |
| | | | | 5.0E-01 | I | 1.0E-03 | I | V | | 1 | | 1.1E+05 | Acrylic Acid | 79-10-7 | 9.9E+01 | n | 4.2E+02 | n | 1.0E+00 | n | 4.4E+00 | n | 2.1E+00 | n | | 4.2E-04 | n | |
| 5.4E-01 | I | 6.8E-05 | I | 4.0E-02 | A | 2.0E-03 | I | V | | 1 | | 1.1E+04 | Acrylonitrile | 107-13-1 | 2.5E-01 | c* | 1.1E+00 | c* | 4.1E-02 | c* | 1.8E-01 | c* | 5.2E-02 | c* | | 1.1E-05 | c* | |
| | | | | | | 6.0E-03 | P | | | 1 | 0.1 | | Adiponitrile | 111-69-3 | 8.5E+06 | nm | 3.6E+07 | nm | 6.3E+00 | n | 2.6E+01 | n | | | | | | |
| 5.6E-02 | C | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Alachlor | 15972-60-8 | 9.7E+00 | c* | 4.1E+01 | c | | | | | 1.1E+00 | c | 2.0E+00 | 8.7E-04 | c | 1.6E-03 |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | Aldicarb | 116-06-3 | 6.3E+01 | n | 8.2E+02 | n | | | | | 2.0E+01 | n | 3.0E+00 | 4.9E-03 | n | 7.5E-04 |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | Aldicarb Sulfone | 1646-88-4 | 6.3E+01 | n | 8.2E+02 | n | | | | | 2.0E+01 | n | 2.0E+00 | 4.4E-03 | n | 4.4E-04 |
| | | | | | | | | | | 1 | 0.1 | | Aldicarb sulfoxide | 1646-87-3 | | | | | | | | | | | 4.0E+00 | | | 8.8E-04 |
| 1.7E+01 | I | 4.9E-03 | I | 3.0E-05 | I | | | V | | 1 | | | Aldrin | 309-00-2 | 3.9E-02 | c* | 1.8E-01 | c | 5.7E-04 | c | 2.5E-03 | c | 9.2E-04 | c | | 1.5E-04 | c | |
| | | | | 5.0E-03 | I | 1.0E-04 | X | V | | 1 | | 1.1E+05 | Allyl Alcohol | 107-18-6 | 3.5E+00 | n | 1.5E+01 | n | 1.0E-01 | n | 4.4E-01 | n | 2.1E-01 | n | | 4.2E-05 | n | |
| 2.1E-02 | C | 6.0E-06 | C | | | 1.0E-03 | I | V | | 1 | | 1.4E+03 | Allyl Chloride | 107-05-1 | 7.2E-01 | c** | 3.2E+00 | c** | 4.7E-01 | c** | 2.0E+00 | c** | 7.3E-01 | c** | | 2.3E-04 | c** | |
| | | | | 1.0E+00 | P | 5.0E-03 | P | | | 1 | | | Aluminum | 7429-90-5 | 7.7E+04 | n | 1.1E+06 | nm | 5.2E+00 | n | 2.2E+01 | n | 2.0E+04 | n | | 3.0E+04 | n | |
| | | | | 4.0E-04 | I | | | | | 1 | | | Aluminum Phosphide | 20859-73-8 | 3.1E+01 | n | 4.7E+02 | n | | | | | 8.0E+00 | n | | | | |
| | | | | 9.0E-03 | I | | | | | 1 | 0.1 | | Ametryn | 834-12-8 | 5.7E+02 | n | 7.4E+03 | n | | | | | 1.5E+02 | n | | 1.6E-01 | n | |
| 2.1E+01 | C | 6.0E-03 | C | | | | | | | 1 | 0.1 | | Aminobiphenyl, 4- | 92-67-1 | 2.6E-02 | c | 1.1E-01 | c | 4.7E-04 | c | 2.0E-03 | c | 3.0E-03 | c | | 1.5E-05 | c | |
| | | | | 8.0E-02 | P | | | | | 1 | 0.1 | | Aminophenol, m- | 591-27-5 | 5.1E+03 | n | 6.6E+04 | n | | | | | 1.6E+03 | n | | 6.1E-01 | n | |
| | | | | 4.0E-03 | X | | | | | 1 | 0.1 | | Aminophenol, o- | 95-55-6 | 2.5E+02 | n | 3.3E+03 | n | | | | | 7.9E+01 | n | | 3.0E-02 | n | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Aminophenol, p- | 123-30-8 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 1.5E-01 | n | |
| | | | | 2.5E-03 | I | | | | | 1 | 0.1 | | Amitraz | 33089-61-1 | 1.6E+02 | n | 2.1E+03 | n | | | | | 8.2E+00 | n | | 4.2E+00 | n | |
| | | | | | | 5.0E-01 | I | V | | 1 | | | Ammonia | 7664-41-7 | | | | | 5.2E+02 | n | 2.2E+03 | n | | | | | | |
| | | | | 2.0E-03 | X | | | | | 1 | 0.1 | | Ammonium Picrate | 131-74-8 | 1.3E+02 | n | 1.6E+03 | n | | | | | 4.0E+01 | n | | 1.9E-01 | n | |
| | | | | 2.0E-01 | I | | | | | 1 | | | Ammonium Sulfamate | 7773-06-0 | 1.6E+04 | n | 2.3E+05 | nm | | | | | 4.0E+03 | n | | | | |
| | | | | | | 3.0E-03 | X | V | | 1 | | 1.4E+04 | Amyl Alcohol, tert- | 75-85-4 | 8.2E+01 | n | 3.4E+02 | n | 3.1E+00 | n | 1.3E+01 | n | 6.3E+00 | n | | 1.3E-03 | n | |
| 5.7E-03 | I | 1.6E-06 | C | 7.0E-03 | P | 1.0E-03 | I | | | 1 | 0.1 | | Aniline | 62-53-3 | 9.5E+01 | c** | 4.0E+02 | c* | 1.0E+00 | n | 4.4E+00 | n | 1.3E+01 | c* | | 4.6E-03 | c* | |
| 4.0E-02 | P | | | 2.0E-03 | X | | | | | 1 | 0.1 | | Anthraquinone, 9,10- | 84-65-1 | 1.4E+01 | c** | 5.7E+01 | c* | | | | | 1.4E+00 | c* | | 1.4E-02 | c* | |
| | | | | 4.0E-04 | I | 3.0E-04 | A | | | 0.15 | | | Antimony (metallic) | 7440-36-0 | 3.1E+01 | n | 4.7E+02 | n | 3.1E-01 | n | 1.3E+00 | n | 7.8E+00 | n | 6.0E+00 | 3.5E-01 | n | 2.7E-01 |
| | | | | 5.0E-04 | H | | | | | 0.15 | | | Antimony Pentoxide | 1314-60-9 | 3.9E+01 | n | 5.8E+02 | n | | | | | 9.7E+00 | n | | | | |
| | | | | 4.0E-04 | H | | | | | 0.15 | | | Antimony Tetroxide | 1332-81-6 | 3.1E+01 | n | 4.7E+02 | n | | | | | 7.8E+00 | n | | | | |
| | | | | | | 2.0E-04 | I | | | 0.15 | | | Antimony Trioxide | 1309-64-4 | 2.8E+05 | nm | 1.2E+06 | nm | 2.1E-01 | n | 8.8E-01 | n | | | | | | |
| 1.5E+00 | I | 4.3E-03 | I | 3.0E-04 | I | 1.5E-05 | C | | | 1 | 0.03 | | Arsenic, Inorganic | 7440-38-2 | 6.8E-01 | c*R | 3.0E+00 | cR | 6.5E-04 | c* | 2.9E-03 | c* | 5.2E-02 | c | 1.0E+01 | 1.5E-03 | c | 2.9E-01 |
| | | | | 3.5E-06 | C | 5.0E-05 | I | | | 1 | | | Arsine | 7784-42-1 | 2.7E-01 | n | 4.1E+00 | n | 5.2E-02 | n | 2.2E-01 | n | 7.0E-02 | n | | | | |
| | | | | | | | | | | 1 | | | Asbestos (units in fibers) | 1332-21-4 | | | | | | | | | | | 7.0E+06(G) | | | |
| | | | | 3.6E-02 | O | | | | | 1 | 0.1 | | Asulam | 3337-71-1 | 2.3E+03 | n | 3.0E+04 | n | | | | | 7.2E+02 | n | | 1.8E-01 | n | |
| 2.3E-01 | C | | | 3.5E-02 | I | | | | | 1 | 0.1 | | Atrazine | 1912-24-9 | 2.4E+00 | c | 1.0E+01 | c | | | | | 3.0E-01 | c | 3.0E+00 | 2.0E-04 | c | 1.9E-03 |
| 8.8E-01 | C | 2.5E-04 | C | | | | | | | 1 | 0.1 | | Auramine | 492-80-8 | 6.2E-01 | c | 2.6E+00 | c | 1.1E-02 | c | 4.9E-02 | c | 7.8E-02 | c | | 7.1E-04 | c | |
| | | | | 4.0E-04 | I | | | | | 1 | 0.1 | | Avermectin B1 | 65195-55-3 | 2.5E+01 | n | 3.3E+02 | n | | | | | 8.0E+00 | n | | 1.4E+01 | n | |
| | | | | 3.0E-03 | A | 1.0E-02 | A | | | 1 | 0.1 | | Azinphos-methyl | 86-50-0 | 1.9E+02 | n | 2.5E+03 | n | 1.0E+01 | n | 4.4E+01 | n | 5.6E+01 | n | | 1.7E-02 | n | |
| 1.1E-01 | I | 3.1E-05 | I | | | | | V | | 1 | | | Azobenzene | 103-33-3 | 5.6E+00 | c | 2.6E+01 | c | 9.1E-02 | c | 4.0E-01 | c | 1.2E-01 | c | | 9.3E-04 | c | |
| | | | | 1.0E+00 | P | 7.0E-06 | P | | | 1 | 0.1 | | Azodicarbonamide | 123-77-3 | 8.6E+03 | n | 4.0E+04 | n | 7.3E-03 | n | 3.1E-02 | n | 2.0E+04 | n | | 6.8E+00 | n | |
| | | | | 2.0E-01 | I | 5.0E-04 | H | | | 0.07 | | | Barium | 7440-39-3 | 1.5E+04 | n | 2.2E+05 | nm | 5.2E-01 | n | 2.2E+00 | n | 3.8E+03 | n | 2.0E+03 | 1.6E+02 | n | 8.2E+01 |
| | | | | 5.0E-03 | O | | | V | | 1 | | | Benfluralin | 1861-40-1 | 3.9E+02 | n | 5.8E+03 | n | | | | | 2.8E+01 | n | | 9.4E-01 | n | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.1 | | Benomyl | 17804-35-2 | 3.2E+03 | n | 4.1E+04 | n | | | | | 9.7E+02 | n | | 8.5E-01 | n | |
| | | | | 2.0E-01 | I | | | | | 1 | 0.1 | | Bensulfuron-methyl | 83055-99-6 | 1.3E+04 | n | 1.6E+05 | nm | | | | | 3.9E+03 | n | | 1.0E+00 | n | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Bentazon | 25057-89-0 | 1.9E+03 | n | 2.5E+04 | n | | | | | 5.7E+02 | n | | 1.2E-01 | n | |
| 4.0E-03 | P | | | 1.0E-01 | I | | | V | | 1 | | 1.2E+03 | Benzaldehyde | 100-52-7 | 1.7E+02 | c* | 8.2E+02 | c | | | | | 1.9E+01 | c | | 4.1E-03 | c | |
| 5.5E-02 | I | 7.8E-06 | I | 4.0E-03 | I | 3.0E-02 | I | V | | 1 | | 1.8E+03 | Benzene | 71-43-2 | 1.2E+00 | c* | 5.1E+00 | c* | 3.6E-01 | c* | 1.6E+00 | c* | 4.6E-01 | c* | 5.0E+00 | 2.3E-04 | c* | 2.6E-03 |
| 1.0E-01 | X | | | 3.0E-04 | X | | | | | 1 | 0.1 | | Benzenediamine-2-methyl sulfate, 1,4- | 6369-59-1 | 5.4E+00 | c** | 2.3E+01 | c* | | | | | 7.8E-01 | c** | | 2.2E-04 | c** | |
| | | | | 1.0E-03 | P | | | V | | 1 | | 1.3E+03 | Benzenethiol | 108-98-5 | 7.8E+01 | n | 1.2E+03 | n | | | | | 1.7E+01 | n | | 1.1E-02 | n | |
| 2.3E+02 | I | 6.7E-02 | I | 3.0E-03 | I | | | | M | 1 | 0.1 | | Benzidine | 92-87-5 | 5.3E-04 | c | 1.0E-02 | c | 1.5E-05 | c | 1.8E-04 | c | 1.1E-04 | c | | 2.8E-07 | c | |
| | | | | 4.0E+00 | I | | | | | 1 | 0.1 | | Benzoic Acid | 65-85-0 | 2.5E+05 | nm | 3.3E+06 | nm | | | | | 7.5E+04 | n | | 1.5E+01 | n | |
| 1.3E+01 | I | | | | | | | V | | 1 | | 3.2E+02 | Benzotrichloride | 98-07-7 | 5.3E-02 | c | 2.5E-01 | c | | | | | 3.0E-03 | c | | 6.6E-06 | c | |
| | | | | 1.0E-01 | P | | | | | 1 | 0.1 | | Benzyl Alcohol | 100-51-6 | 6.3E+03 | n | 8.2E+04 | n | | | | | 2.0E+03 | n | | 4.8E-01 | n | |
| 1.7E-01 | I | 4.9E-05 | C | 2.0E-03 | P | 1.0E-03 | P | V | | 1 | | 1.5E+03 | Benzyl Chloride | 100-44-7 | 1.1E+00 | c* | 4.8E+00 | c* | 5.7E-02 | c* | 2.5E-01 | c* | 8.9E-02 | c* | | 9.8E-05 | c* | |
| | | 2.4E-03 | I | 2.0E-03 | I | 2.0E-05 | I | | | 0.007 | | | Beryllium and compounds | 7440-41-7 | 1.6E+02 | n | 2.3E+03 | n | 1.2E-03 | c* | 5.1E-03 | c* | 2.5E+01 | n | 4.0E+00 | 1.9E+01 | n | 3.2E+00 |
| | | | | 9.0E-03 | P | | | | | 1 | 0.1 | | Bifenox | 42576-02-3 | 5.7E+02 | n | 7.4E+03 | n | | | | | 1.0E+02 | n | | 7.6E-01 | n | |
| | | | | 1.5E-02 | I | | | | | 1 | 0.1 | | Biphenthrin | 82657-04-3 | 9.5E+02 | n | 1.2E+04 | n | | | | | 3.0E+02 | n | | 1.4E+03 | n | |
| 8.0E-03 | I | | | 5.0E-01 | I | 4.0E-04 | X | V | | 1 | | | Biphenyl, 1,1'- | 92-52-4 | 4.7E+01 | n | 2.0E+02 | n | 4.2E-01 | n | 1.8E+00 | n | 8.3E-01 | n | | 8.7E-03 | n | |
| | | | | 4.0E-02 | I | | | V | | 1 | | 1.0E+03 | Bis(2-chloro-1-methylethyl) ether | 108-60-1 | 3.1E+03 | ns | 4.7E+04 | ns | | | | | 7.1E+02 | n | | 2.6E-01 | n | |
| | | | | 3.0E-03 | P | | | | | 1 | 0.1 | | Bis(2-chloroethoxy)methane | 111-91-1 | 1.9E+02 | n | 2.5E+03 | n | | | | | 5.9E+01 | n | | 1.3E-02 | n | |
| 1.1E+00 | I | 3.3E-04 | I | | | | | V | | 1 | | 5.1E+03 | Bis(2-chloroethyl)ether | 111-44-4 | 2.3E-01 | c | 1.0E+00 | c | 8.5E-03 | c | 3.7E-02 | c | 1.4E-02 | c | | 3.6E-06 | c | |
| 2.2E+02 | I | 6.2E-02 | I | | | | | V | | 1 | | 4.2E+03 | Bis(chloromethyl)ether | 542-88-1 | 8.3E-05 | c | 3.6E-04 | c | 4.5E-05 | c | 2.0E-04 | c | 7.2E-05 | c | | 1.7E-08 | c | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.1 | | Bisphenol A | 80-05-7 | 3.2E+03 | n | 4.1E+04 | n | | | | | 7.7E+02 | n | | 5.8E+01 | n | |
| | | | | 2.0E-01 | I | 2.0E-02 | H | | | 1 | | | Boron And Borates Only | 7440-42-8 | 1.6E+04 | n | 2.3E+05 | nm | 2.1E+01 | n | 8.8E+01 | n | 4.0E+03 | n | | 1.3E+01 | n | |
| | | | | 2.0E+00 | P | 2.0E-02 | P | V | | 1 | | | Boron Trichloride | 10294-34-5 | 1.6E+05 | nm | 2.3E+06 | nm | 2.1E+01 | n | 8.8E+01 | n | 4.2E+01 | n | | | | |
| | | | | 4.0E-02 | C | 1.3E-02 | C | V | | 1 | | | Boron Trifluoride | 7637-07-2 | 3.1E+03 | n | 4.7E+04 | n | 1.4E+01 | n | 5.7E+01 | n | 2.6E+01 | n | | | | |
| 7.0E-01 | I | | | 4.0E-03 | I | | | | | 1 | | | Bromate | 15541-45-4 | 9.9E-01 | c | 4.7E+00 | c | | | | | 1.1E-01 | c | 1.0E+01 | 8.5E-04 | c | 7.7E-02 |
| 2.0E+00 | X | 6.0E-04 | X | | | | | V | | 1 | | 2.4E+03 | Bromo-2-chloroethane, 1- | 107-04-0 | 2.6E-02 | c | 1.1E-01 | c | 4.7E-03 | c | 2.0E-02 | c | 7.4E-03 | c | | 2.1E-06 | c | |
| | | | | 3.0E-04 | X | | | V | | 1 | | 9.0E+02 | Bromo-3-fluorobenzene, 1- | 1073-06-9 | 2.3E+01 | n | 3.5E+02 | n | | | | | 4.9E+00 | n | | 4.7E-03 | n | |

TR=1E-06
THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 3.0E-04 | X | | | V | | 1 | | 3.2E+02 | Bromo-4-fluorobenzene, 1- | 460-00-4 | 2.3E+01 | n | 3.5E+02 | ns | | | | | 4.6E+00 | n | | 4.4E-03 | n | |
| | | | | | | | | | | 1 | 0.1 | | Bromoacetic acid | 79-08-3 | | | | | | | | | | | 6.0E+01(G) | | | 1.2E-02 |
| | | | | 8.0E-03 | I | 6.0E-02 | I | V | | 1 | | 6.8E+02 | Bromobenzene | 108-86-1 | 2.9E+02 | n | 1.8E+03 | ns | 6.3E+01 | n | 2.6E+02 | n | 6.2E+01 | n | | 4.2E-02 | n | |
| | | | | | | 4.0E-02 | X | V | | 1 | | 4.0E+03 | Bromochloromethane | 74-97-5 | 1.5E+02 | n | 6.3E+02 | n | 4.2E+01 | n | 1.8E+02 | n | 8.3E+01 | n | | 2.1E-02 | n | |
| 6.2E-02 | I | 3.7E-05 | C | 2.0E-02 | I | | | V | | 1 | | 9.3E+02 | Bromodichloromethane | 75-27-4 | 2.9E-01 | c | 1.3E+00 | c | 7.6E-02 | c | 3.3E-01 | c | 1.3E-01 | c | 8.0E+01(G) | 3.6E-05 | c | 2.2E-02 |
| 7.9E-03 | I | 1.1E-06 | I | 2.0E-02 | I | | | V | | 1 | | 9.2E+02 | Bromoform | 75-25-2 | 1.9E+01 | c* | 8.6E+01 | c | 2.6E+00 | c | 1.1E+01 | c | 3.3E+00 | c | 8.0E+01(G) | 8.7E-04 | c | 2.1E-02 |
| | | | | 1.4E-03 | I | 5.0E-03 | I | V | | 1 | | 3.6E+03 | Bromomethane | 74-83-9 | 6.8E+00 | n | 3.0E+01 | n | 5.2E+00 | n | 2.2E+01 | n | 7.5E+00 | n | | 1.9E-03 | n | |
| | | | | 5.0E-03 | H | | | V | | 1 | | | Bromophos | 2104-96-3 | 3.9E+02 | n | 5.8E+03 | n | | | | | 3.5E+01 | n | | 1.5E-01 | n | |
| | | | | | | 1.0E-01 | A | V | | 1 | | 9.7E+02 | Bromopropane, 1- | 106-94-5 | 2.2E+02 | n | 9.4E+02 | n | 1.0E+02 | n | 4.4E+02 | n | 2.1E+02 | n | | 6.4E-02 | n | |
| 1.0E-01 | O | | | 1.5E-02 | O | | | | | 1 | 0.1 | | Bromoxynil | 1689-84-5 | 5.3E+00 | c | 2.2E+01 | c | | | | | 6.1E-01 | c | | 5.2E-04 | c | |
| 1.0E-01 | O | | | 1.5E-02 | O | | | V | | 1 | | | Bromoxynil Octanoate | 1689-99-2 | 6.7E+00 | c | 3.2E+01 | c | | | | | 2.4E-01 | c | | 2.1E-03 | c | |
| 6.0E-01 | C | 3.0E-05 | I | | | 2.0E-03 | I | V | | 1 | | 6.7E+02 | Butadiene, 1,3- | 106-99-0 | 7.6E-02 | c* | 3.3E-01 | c* | 9.4E-02 | c* | 4.1E-01 | c* | 7.1E-02 | c* | | 3.9E-05 | c* | |
| | | | | 3.0E-02 | O | | | | | 1 | 0.1 | | Butanoic acid, 4-(2,4-dichlorophenoxy)- | 94-82-6 | 1.9E+03 | n | 2.5E+04 | n | | | | | 4.5E+02 | n | | 4.2E-01 | n | |
| | | | | 1.0E-01 | I | | | V | | 1 | | 7.6E+03 | Butanol, N- | 71-36-3 | 7.8E+03 | ns | 1.2E+05 | nms | | | | | 2.0E+03 | n | | 4.1E-01 | n | |
| | | | | 2.0E+00 | P | 3.0E+01 | P | V | | 1 | | 2.1E+04 | Butyl alcohol, sec- | 78-92-2 | 1.3E+05 | nms | 1.5E+06 | nms | 3.1E+04 | n | 1.3E+05 | n | 2.4E+04 | n | | 5.0E+00 | n | |
| | | | | 5.0E-02 | I | | | V | | 1 | | | Butylate | 2008-41-5 | 3.9E+03 | n | 5.8E+04 | n | | | | | 4.6E+02 | n | | 4.5E-01 | n | |
| 2.0E-04 | C | 5.7E-08 | C | | | | | | | 1 | 0.1 | | Butylated hydroxyanisole | 25013-16-5 | 2.7E+03 | c | 1.1E+04 | c | 4.9E+01 | c | 2.2E+02 | c | 1.5E+02 | c | | 2.9E-01 | c | |
| 3.6E-03 | P | | | 3.0E-01 | P | | | | | 1 | 0.1 | | Butylated hydroxytoluene | 128-37-0 | 1.5E+02 | c | 6.4E+02 | c | | | | | 3.4E+00 | c | | 1.0E-01 | c | |
| | | | | 5.0E-02 | P | | | V | | 1 | | 1.1E+02 | Butylbenzene, n- | 104-51-8 | 3.9E+03 | ns | 5.8E+04 | ns | | | | | 1.0E+03 | n | | 3.2E+00 | n | |
| | | | | 1.0E-01 | X | | | V | | 1 | | 1.5E+02 | Butylbenzene, sec- | 135-98-8 | 7.8E+03 | ns | 1.2E+05 | nms | | | | | 2.0E+03 | n | | 5.9E+00 | n | |
| | | | | 1.0E-01 | X | | | V | | 1 | | 1.8E+02 | Butylbenzene, tert- | 98-06-6 | 7.8E+03 | ns | 1.2E+05 | nms | | | | | 6.9E+02 | n | | 1.6E+00 | n | |
| | | | | 2.0E-02 | A | | | | | 1 | 0.1 | | Cacodylic Acid | 75-60-5 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 1.1E-01 | n | |
| | | 1.8E-03 | I | 1.0E-03 | I | 1.0E-05 | A | | | 0.025 | 0.001 | | Cadmium (Diet) | 7440-43-9 | 7.1E+01 | n | 9.8E+02 | n | | | | | | | | | | |
| | | 1.8E-03 | I | 5.0E-04 | I | 1.0E-05 | A | | | 0.05 | 0.001 | | Cadmium (Water) | 7440-43-9 | | | | | 1.6E-03 | c** | 6.8E-03 | c** | 9.2E+00 | n | 5.0E+00 | 6.9E-01 | n | 3.8E-01 |
| | | | | 5.0E-01 | I | 2.2E-03 | C | | | 1 | 0.1 | | Caprolactam | 105-60-2 | 3.1E+04 | n | 4.0E+05 | nm | 2.3E+00 | n | 9.6E+00 | n | 9.9E+03 | n | | 2.5E+00 | n | |
| 1.5E-01 | C | 4.3E-05 | C | 2.0E-03 | I | | | | | 1 | 0.1 | | Captafol | 2425-06-1 | 3.6E+00 | c* | 1.5E+01 | c | 6.5E-02 | c | 2.9E-01 | c | 4.0E-01 | c* | | 7.1E-04 | c* | |
| 2.3E-03 | C | 6.6E-07 | C | 1.3E-01 | I | | | | | 1 | 0.1 | | Captan | 133-06-2 | 2.4E+02 | c* | 1.0E+03 | c | 4.3E+00 | c | 1.9E+01 | c | 3.1E+01 | c* | | 2.2E-02 | c* | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Carbaryl | 63-25-2 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.8E+03 | n | | 1.7E+00 | n | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Carbofuran | 1563-66-2 | 3.2E+02 | n | 4.1E+03 | n | | | | | 9.4E+01 | n | 4.0E+01 | 3.7E-02 | n | 1.6E-02 |
| | | | | 1.0E-01 | I | 7.0E-01 | I | V | | 1 | | 7.4E+02 | Carbon Disulfide | 75-15-0 | 7.7E+02 | ns | 3.5E+03 | ns | 7.3E+02 | n | 3.1E+03 | n | 8.1E+02 | n | | 2.4E-01 | n | |
| 7.0E-02 | I | 6.0E-06 | I | 4.0E-03 | I | 1.0E-01 | I | V | | 1 | | 4.6E+02 | Carbon Tetrachloride | 56-23-5 | 6.5E-01 | c | 2.9E+00 | c | 4.7E-01 | c | 2.0E+00 | c | 4.6E-01 | c | 5.0E+00 | 1.8E-04 | c | 1.9E-03 |
| | | | | | | 1.0E-01 | P | V | | 1 | | 5.9E+03 | Carbonyl Sulfide | 463-58-1 | 6.7E+01 | n | 2.8E+02 | n | 1.0E+02 | n | 4.4E+02 | n | 2.1E+02 | n | | 5.1E-01 | n | |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Carbosulfan | 55285-14-8 | 6.3E+02 | n | 8.2E+03 | n | | | | | 5.1E+01 | n | | 1.2E+00 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Carboxin | 5234-68-4 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.9E+03 | n | | 1.0E+00 | n | |
| | | | | | | 9.0E-04 | I | | | 1 | | | Ceric oxide | 1306-38-3 | 1.3E+06 | nm | 5.4E+06 | nm | 9.4E-01 | n | 3.9E+00 | n | | | | | | |
| | | | | 1.0E-01 | I | | | V | | 1 | | | Chloral Hydrate | 302-17-0 | 7.8E+03 | n | 1.2E+05 | nm | | | | | 2.0E+03 | n | | 4.0E-01 | n | |
| | | | | 1.5E-02 | I | | | | | 1 | 0.1 | | Chloramben | 133-90-4 | 9.5E+02 | n | 1.2E+04 | n | | | | | 2.9E+02 | n | | 7.0E-02 | n | |
| | | | | | | | | | | | | | Chloramines, Organic | E701235 | | | | | | | | | | | 4.0E+03(G) | | |
| 4.0E-01 | H | | | | | | | | | 1 | 0.1 | | Chloranil | 118-75-2 | 1.3E+00 | c | 5.7E+00 | c | | | | | 1.8E-01 | c | | 1.5E-04 | c | |
| 3.5E-01 | I | 1.0E-04 | I | 5.0E-04 | I | 7.0E-04 | I | V | | 1 | 0.04 | | Chlordane (technical mixture) | 12789-03-6 | 1.7E+00 | c* | 7.7E+00 | c* | 2.8E-02 | c* | 1.2E-01 | c* | 2.0E-02 | c* | 2.0E+00 | 2.7E-03 | c* | 2.7E-01 |
| 1.0E+01 | I | 4.6E-03 | C | 3.0E-04 | I | | | | | 1 | 0.1 | | Chlordecone (Kepone) | 143-50-0 | 5.4E-02 | c | 2.3E-01 | c | 6.1E-04 | c | 2.7E-03 | c | 3.5E-03 | c | | 1.2E-04 | c | |
| | | | | 7.0E-04 | A | | | | | 1 | 0.1 | | Chlorfenvinphos | 470-90-6 | 4.4E+01 | n | 5.7E+02 | n | | | | | 1.1E+01 | n | | 3.1E-02 | n | |
| | | | | 9.0E-02 | O | | | | | 1 | 0.1 | | Chlorimuron, Ethyl- | 90982-32-4 | 5.7E+03 | n | 7.4E+04 | n | | | | | 1.8E+03 | n | | 6.0E-01 | n | |
| | | | | 1.0E-01 | I | 1.5E-04 | A | V | | 1 | | 2.8E+03 | Chlorine | 7782-50-5 | 1.8E-01 | n | 7.8E-01 | n | 1.5E-01 | n | 6.4E-01 | n | 3.0E-01 | n | 4.0E+03(G) | 1.5E-04 | n | 2.0E+00 |
| | | | | 3.0E-02 | I | 2.0E-04 | I | V | | 1 | | | Chlorine Dioxide | 10049-04-4 | 2.3E+03 | n | 3.4E+04 | n | 2.1E-01 | n | 8.8E-01 | n | 4.2E-01 | n | 8.0E+02(G) | | | |
| | | | | 3.0E-02 | I | | | | | 1 | | | Chlorite (Sodium Salt) | 7758-19-2 | 2.3E+03 | n | 3.5E+04 | n | | | | | 6.0E+02 | n | 1.0E+03 | | | |
| | | | | | | 5.0E+01 | I | V | | 1 | | 1.2E+03 | Chloro-1,1-difluoroethane, 1- | 75-68-3 | 5.4E+04 | ns | 2.3E+05 | nms | 5.2E+04 | n | 2.2E+05 | n | 1.0E+05 | n | | 5.2E+01 | n | |
| | | 3.0E-04 | I | 2.0E-02 | H | 2.0E-02 | I | V | | 1 | | 7.9E+02 | Chloro-1,3-butadiene, 2- | 126-99-8 | 1.0E-02 | c | 4.4E-02 | c | 9.4E-03 | c | 4.1E-02 | c | 1.9E-02 | c | | 9.8E-06 | c | |
| 4.6E-01 | H | | | | | | | | | 1 | 0.1 | | Chloro-2-methylaniline HCl, 4- | 3165-93-3 | 1.2E+00 | c | 5.0E+00 | c | | | | | 1.7E-01 | c | | 1.5E-04 | c | |
| 1.0E-01 | P | 7.7E-05 | C | 3.0E-03 | X | | | | | 1 | 0.1 | | Chloro-2-methylaniline, 4- | 95-69-2 | 5.4E+00 | c* | 2.3E+01 | c | 3.6E-02 | c | 1.6E-01 | c | 7.0E-01 | c* | | 4.0E-04 | c* | |
| 2.7E-01 | X | | | | | | | V | | 1 | | 1.2E+04 | Chloroacetaldehyde, 2- | 107-20-0 | 2.6E+00 | c | 1.2E+01 | c | | | | | 2.9E-01 | c | | 5.8E-05 | c | |
| | | | | | | | | | | 1 | 0.1 | | Chloroacetic Acid | 79-11-8 | | | | | | | | | | | 6.0E+01(G) | | | 1.2E-02 |
| | | | | | | 3.0E-05 | I | | | 1 | 0.1 | | Chloroacetophenone, 2- | 532-27-4 | 4.3E+04 | n | 1.8E+05 | nm | 3.1E-02 | n | 1.3E-01 | n | | | | | | |
| 2.0E-01 | P | | | 4.0E-03 | I | | | | | 1 | 0.1 | | Chloroaniline, p- | 106-47-8 | 2.7E+00 | c* | 1.1E+01 | c | | | | | 3.7E-01 | c | | 1.6E-04 | c | |
| | | | | 2.0E-02 | I | 5.0E-02 | P | V | | 1 | | 7.6E+02 | Chlorobenzene | 108-90-7 | 2.8E+02 | n | 1.3E+03 | ns | 5.2E+01 | n | 2.2E+02 | n | 7.8E+01 | n | 1.0E+02 | 5.3E-02 | n | 6.8E-02 |
| | | | | 1.0E-01 | X | | | | | 1 | 0.1 | | Chlorobenzene sulfonic acid, p- | 98-66-8 | 6.3E+03 | n | 8.2E+04 | n | | | | | 2.0E+03 | n | | 4.7E-01 | n | |
| 1.1E-01 | C | 3.1E-05 | C | 2.0E-02 | I | | | | | 1 | 0.1 | | Chlorobenzilate | 510-15-6 | 4.9E+00 | c | 2.1E+01 | c | 9.1E-02 | c | 4.0E-01 | c | 3.1E-01 | c | | 1.0E-03 | c | |
| | | | | 3.0E-02 | X | | | | | 1 | 0.1 | | Chlorobenzoic Acid, p- | 74-11-3 | 1.9E+03 | n | 2.5E+04 | n | | | | | 5.1E+02 | n | | 1.3E-01 | n | |
| | | 8.6E-06 | C | 3.0E-03 | P | 3.0E-01 | P | V | | 1 | | 2.9E+02 | Chlorobenzotrifluoride, 4- | 98-56-6 | 2.2E+00 | c* | 9.6E+00 | c | 3.3E-01 | c | 1.4E+00 | c | 6.5E-01 | c* | | 2.3E-03 | c* | |
| | | | | 4.0E-02 | P | | | V | | 1 | | 7.3E+02 | Chlorobutane, 1- | 109-69-3 | 3.1E+03 | ns | 4.7E+04 | ns | | | | | 6.4E+02 | n | | 2.6E-01 | n | |
| | | | | | | 5.0E+01 | I | V | | 1 | | 1.7E+03 | Chlorodifluoromethane | 75-45-6 | 4.9E+04 | ns | 2.1E+05 | nms | 5.2E+04 | n | 2.2E+05 | n | 1.0E+05 | n | | 4.3E+01 | n | |
| | | | | 2.0E-02 | P | | | V | | 1 | | 1.1E+05 | Chloroethanol, 2- | 107-07-3 | 1.6E+03 | n | 2.3E+04 | n | | | | | 4.0E+02 | n | | 8.1E-02 | n | |
| 3.1E-02 | C | 2.3E-05 | I | 1.0E-02 | I | 9.8E-02 | A | V | | 1 | | 2.5E+03 | Chloroform | 67-66-3 | 3.2E-01 | c | 1.4E+00 | c | 1.2E-01 | c | 5.3E-01 | c | 2.2E-01 | c | 8.0E+01(G) | 6.1E-05 | c | 2.2E-02 |
| | | | | | | 9.0E-02 | I | V | | 1 | | 1.3E+03 | Chloromethane | 74-87-3 | 1.1E+02 | n | 4.6E+02 | n | 9.4E+01 | n | 3.9E+02 | n | 1.9E+02 | n | | 4.9E-02 | n | |
| 2.4E+00 | C | 6.9E-04 | C | | | | | V | | 1 | | 9.3E+03 | Chloromethyl Methyl Ether | 107-30-2 | 2.0E-02 | c | 8.9E-02 | c | 4.1E-03 | c | 1.8E-02 | c | 6.5E-03 | c | | 1.4E-06 | c | |
| 3.0E-01 | P | | | 3.0E-03 | P | 1.0E-05 | X | | | 1 | 0.1 | | Chloronitrobenzene, o- | 88-73-3 | 1.8E+00 | c | 7.7E+00 | c | 1.0E-02 | n | 4.4E-02 | n | 2.4E-01 | c | | 2.2E-04 | c | |
| 6.0E-02 | P | | | 7.0E-04 | P | 2.0E-03 | P | | | 1 | 0.1 | | Chloronitrobenzene, p- | 100-00-5 | 9.0E+00 | c** | 3.8E+01 | c* | 2.1E+00 | n | 8.8E+00 | n | 1.2E+00 | c* | | 1.1E-03 | c* | |
| | | | | 5.0E-03 | I | | | V | | 1 | | 2.7E+04 | Chlorophenol, 2- | 95-57-8 | 3.9E+02 | n | 5.8E+03 | n | | | | | 9.1E+01 | n | | 8.9E-02 | n | |
| | | | | | | 4.0E-04 | C | V | | 1 | | 6.2E+02 | Chloropicrin | 76-06-2 | 2.0E+00 | n | 8.2E+00 | n | 4.2E-01 | n | 1.8E+00 | n | 8.3E-01 | n | | 2.5E-04 | n | |
| 1.7E-02 | C | | | 1.5E-02 | I | | | | | 1 | 0.1 | | Chlorothalonil | 1897-45-6 | 3.2E+01 | c* | 1.4E+02 | c* | | | | | 4.0E+00 | c* | | 9.0E-03 | c* | |
| | | | | 2.0E-02 | I | | | V | | 1 | | 9.1E+02 | Chlorotoluene, o- | 95-49-8 | 1.6E+03 | ns | 2.3E+04 | ns | | | | | 2.4E+02 | n | | 2.3E-01 | n | |
| | | | | 2.0E-02 | X | | | V | | 1 | | 2.5E+02 | Chlorotoluene, p- | 106-43-4 | 1.6E+03 | ns | 2.3E+04 | ns | | | | | 2.5E+02 | n | | 2.4E-01 | n | |
| 2.4E+02 | C | 6.9E-02 | C | | | | | | | 1 | 0.1 | | Chlorozotocin | 54749-90-5 | 2.3E-03 | c | 9.6E-03 | c | 4.1E-05 | c | 1.8E-04 | c | 3.2E-04 | c | | 7.1E-08 | c | |
| | | | | 5.0E-02 | O | | | | | 1 | 0.1 | | Chlorpropham | 101-21-3 | 3.2E+03 | n | 4.1E+04 | n | | | | | 7.1E+02 | n | | 6.4E-01 | n | |
| | | | | 1.0E-03 | A | | | | | 1 | 0.1 | | Chlorpyrifos | 2921-88-2 | 6.3E+01 | n | 8.2E+02 | n | | | | | 8.4E+00 | n | | 1.2E-01 | n | |
| | | | | 1.0E-02 | H | | | | | 1 | 0.1 | | Chlorpyrifos Methyl | 5598-13-0 | 6.3E+02 | n | 8.2E+03 | n | | | | | 1.2E+02 | n | | 5.4E-01 | n | |
| | | | | 5.0E-02 | O | | | | | 1 | 0.1 | | Chlorsulfuron | 64902-72-3 | 3.2E+03 | n | 4.1E+04 | n | | | | | 9.9E+02 | n | | 8.3E-01 | n | |

TR=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Chlorthal-dimethyl | 1861-32-1 | 6.3E+02 | n | 8.2E+03 | n | | | | | 1.2E+02 | n | | 1.5E-01 | n | |
| | | | | 8.0E-04 | H | | | | | 1 | 0.1 | | Chlorthiophos | 60238-56-4 | 5.1E+01 | n | 6.6E+02 | n | | | | | 2.8E+00 | n | | 7.3E-02 | n | |
| | | | | 1.5E+00 | I | | | | | 0.013 | | | Chromium(III), Insoluble Salts | 16065-83-1 | 1.2E+05 | nm | 1.8E+06 | nm | | | | | 2.2E+04 | n | | 4.0E+07 | n | |
| 5.0E-01 | C | 8.4E-02 | G | 3.0E-03 | I | 1.0E-04 | I | | M | 0.025 | | | Chromium(VI) | 18540-29-9 | 3.0E-01 | c | 6.3E+00 | c | 1.2E-05 | c | 1.5E-04 | c | 3.5E-02 | c | | 6.7E-04 | c | |
| | | | | | | | | | | 0.013 | | | Chromium, Total | 7440-47-3 | | | | | | | | | | | 1.0E+02 | | | 1.8E+05 |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Clofentezine | 74115-24-5 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.3E+02 | n | | 1.4E+01 | n | |
| | | 9.0E-03 | P | 3.0E-04 | P | 6.0E-06 | P | | | 1 | | | Cobalt | 7440-48-4 | 2.3E+01 | n | 3.5E+02 | n | 3.1E-04 | c* | 1.4E-03 | c* | 6.0E+00 | n | | 2.7E-01 | n | |
| | | 6.2E-04 | I | | | | | V | M | 1 | | | Coke Oven Emissions | E649830 | | | | | 1.6E-03 | c | 2.0E-02 | c | | | | | | |
| | | | | 4.0E-02 | H | | | | | 1 | | | Copper | 7440-50-8 | 3.1E+03 | n | 4.7E+04 | n | | | | | 8.0E+02 | n | 1.3E+03 | 2.8E+01 | n | 4.6E+01 |
| | | | | 5.0E-02 | I | 6.0E-01 | C | | | 1 | 0.1 | | Cresol, m- | 108-39-4 | 3.2E+03 | n | 4.1E+04 | n | 6.3E+02 | n | 2.6E+03 | n | 9.3E+02 | n | | 7.4E-01 | n | |
| | | | | 5.0E-02 | I | 6.0E-01 | C | | | 1 | 0.1 | | Cresol, o- | 95-48-7 | 3.2E+03 | n | 4.1E+04 | n | 6.3E+02 | n | 2.6E+03 | n | 9.3E+02 | n | | 7.5E-01 | n | |
| | | | | 1.0E-01 | A | 6.0E-01 | C | | | 1 | 0.1 | | Cresol, p- | 106-44-5 | 6.3E+03 | n | 8.2E+04 | n | 6.3E+02 | n | 2.6E+03 | n | 1.9E+03 | n | | 1.5E+00 | n | |
| | | | | 1.0E-01 | A | | | | | 1 | 0.1 | | Cresol, p-chloro-m- | 59-50-7 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.4E+03 | n | | 1.7E+00 | n | |
| | | | | 1.0E-01 | A | 6.0E-01 | C | | | 1 | 0.1 | | Cresols | 1319-77-3 | 6.3E+03 | n | 8.2E+04 | n | 6.3E+02 | n | 2.6E+03 | n | 1.5E+03 | n | | 1.3E+00 | n | |
| 1.9E+00 | H | | | 1.0E-03 | P | | | V | | 1 | | 1.7E+04 | Crotonaldehyde, trans- | 123-73-9 | 3.7E-01 | c | 1.7E+00 | c | | | | | 4.0E-02 | c | | 8.2E-06 | c | |
| | | | | 1.0E-01 | I | 4.0E-01 | I | V | | 1 | | 2.7E+02 | Cumene | 98-82-8 | 1.9E+03 | ns | 9.9E+03 | ns | 4.2E+02 | n | 1.8E+03 | n | 4.5E+02 | n | | 7.4E-01 | n | |
| 2.2E-01 | C | 6.3E-05 | C | | | | | | | 1 | 0.1 | | Cupferron | 135-20-6 | 2.5E+00 | c | 1.0E+01 | c | 4.5E-02 | c | 1.9E-01 | c | 3.5E-01 | c | | 6.1E-04 | c | |
| 8.4E-01 | H | | | 2.0E-03 | H | | | | | 1 | 0.1 | | Cyanazine | 21725-46-2 | 6.5E-01 | c | 2.7E+00 | c | | | | | 8.8E-02 | c | | 4.1E-05 | c | |
| | | | | | | | | | | | | | Cyanides | | | | | | | | | | | | | | | |
| | | | | 1.0E-03 | I | | | | | 1 | | | ~Calcium Cyanide | 592-01-8 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | | | | |
| | | | | 5.0E-03 | I | | | | | 1 | | | ~Copper Cyanide | 544-92-3 | 3.9E+02 | n | 5.8E+03 | n | | | | | 1.0E+02 | n | | | | |
| | | | | 6.0E-04 | I | 8.0E-04 | G | V | | 1 | | 9.5E+05 | ~Cyanide (CN-) | 57-12-5 | 2.3E+01 | n | 1.5E+02 | n | 8.3E-01 | n | 3.5E+00 | n | 1.5E+00 | n | 2.0E+02 | 1.5E-02 | n | 2.0E+00 |
| | | | | 1.0E-03 | I | | | V | | 1 | | | ~Cyanogen | 460-19-5 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | | | | |
| | | | | 9.0E-02 | I | | | V | | 1 | | | ~Cyanogen Bromide | 506-68-3 | 7.0E+03 | n | 1.1E+05 | nm | | | | | 1.8E+03 | n | | | | |
| | | | | 5.0E-02 | I | | | V | | 1 | | | ~Cyanogen Chloride | 506-77-4 | 3.9E+03 | n | 5.8E+04 | n | | | | | 1.0E+03 | n | | | | |
| | | | | 6.0E-04 | I | 8.0E-04 | I | V | | 1 | | 1.0E+07 | ~Hydrogen Cyanide | 74-90-8 | 2.3E+01 | n | 1.5E+02 | n | 8.3E-01 | n | 3.5E+00 | n | 1.5E+00 | n | | 1.5E-02 | n | |
| | | | | 2.0E-03 | I | | | | | 1 | | | ~Potassium Cyanide | 151-50-8 | 1.6E+02 | n | 2.3E+03 | n | | | | | 4.0E+01 | n | | | | |
| | | | | 5.0E-03 | I | | | | | 0.04 | | | ~Potassium Silver Cyanide | 506-61-6 | 3.9E+02 | n | 5.8E+03 | n | | | | | 8.2E+01 | n | | | | |
| | | | | 1.0E-01 | I | | | | | 0.04 | | | ~Silver Cyanide | 506-64-9 | 7.8E+03 | n | 1.2E+05 | nm | | | | | 1.8E+03 | n | | | | |
| | | | | 1.0E-03 | I | | | | | 1 | | | ~Sodium Cyanide | 143-33-9 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | 2.0E+02 | | | |
| | | | | 2.0E-04 | P | | | | | 1 | | | ~Thiocyanates | E1790664 | 1.6E+01 | n | 2.3E+02 | n | | | | | 4.0E+00 | n | | | | |
| | | | | 2.0E-04 | X | | | V | | 1 | | | ~Thiocyanic Acid | 463-56-9 | 1.6E+01 | n | 2.3E+02 | n | | | | | 4.0E+00 | n | | | | |
| | | | | 5.0E-02 | I | | | | | 1 | | | ~Zinc Cyanide | 557-21-1 | 3.9E+03 | n | 5.8E+04 | n | | | | | 1.0E+03 | n | | | | |
| | | | | | | 6.0E+00 | I | V | | 1 | | 1.2E+02 | Cyclohexane | 110-82-7 | 6.5E+03 | ns | 2.7E+04 | ns | 6.3E+03 | n | 2.6E+04 | n | 1.3E+04 | n | | 1.3E+01 | n | |
| 2.0E-02 | X | | | 2.0E-02 | X | | | | | 1 | 0.1 | | Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro- | 87-84-3 | 2.7E+01 | c* | 1.1E+02 | c | | | | | 2.8E+00 | c | | 1.6E-02 | c | |
| | | | | 5.0E+00 | I | 7.0E-01 | P | V | | 1 | | 5.1E+03 | Cyclohexanone | 108-94-1 | 2.8E+04 | ns | 1.3E+05 | nms | 7.3E+02 | n | 3.1E+03 | n | 1.4E+03 | n | | 3.4E-01 | n | |
| | | | | 5.0E-03 | P | 1.0E+00 | X | V | | 1 | | 2.8E+02 | Cyclohexene | 110-83-8 | 3.1E+02 | ns | 3.1E+03 | ns | 1.0E+03 | n | 4.4E+03 | n | 7.0E+01 | n | | 4.6E-02 | n | |
| | | | | 2.0E-01 | I | | | V | | 1 | | 2.9E+05 | Cyclohexylamine | 108-91-8 | 1.6E+04 | n | 2.3E+05 | nm | | | | | 3.8E+03 | n | | 1.0E+00 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Cyfluthrin | 68359-37-5 | 1.6E+03 | n | 2.1E+04 | n | | | | | 1.2E+02 | n | | 3.1E+01 | n | |
| | | | | 1.0E-03 | O | | | | | 1 | 0.1 | | Cyhalothrin | 68085-85-8 | 6.3E+01 | n | 8.2E+02 | n | | | | | 2.0E+01 | n | | 1.4E+01 | n | |
| | | | | 5.0E-01 | O | | | | | 1 | 0.1 | | Cyromazine | 66215-27-8 | 3.2E+04 | n | 4.1E+05 | nm | | | | | 9.9E+03 | n | | 2.5E+00 | n | |
| 2.4E-01 | I | 6.9E-05 | C | 3.0E-05 | X | | | | | 1 | 0.1 | | DDD, p,p`- (DDD) | 72-54-8 | 1.9E+00 | n | 9.6E+00 | c** | 4.1E-02 | c | 1.8E-01 | c | 3.2E-02 | c** | | 7.5E-03 | c** | |
| 3.4E-01 | I | 9.7E-05 | C | 3.0E-04 | X | | | V | | 1 | | | DDE, p,p'- | 72-55-9 | 2.0E+00 | c* | 9.3E+00 | c* | 2.9E-02 | c | 1.3E-01 | c | 4.6E-02 | c | | 1.1E-02 | c | |
| 3.4E-01 | I | 9.7E-05 | I | 5.0E-04 | I | | | | | 1 | 0.03 | | DDT | 50-29-3 | 1.9E+00 | c* | 8.5E+00 | c* | 2.9E-02 | c | 1.3E-01 | c | 2.3E-01 | c* | | 7.7E-02 | c* | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Dalapon | 75-99-0 | 1.9E+03 | n | 2.5E+04 | n | | | | | 6.0E+02 | n | 2.0E+02 | 1.2E-01 | n | 4.1E-02 |
| 1.8E-02 | C | 5.1E-06 | C | 1.5E-01 | I | | | | | 1 | 0.1 | | Daminozide | 1596-84-5 | 3.0E+01 | c | 1.3E+02 | c | 5.5E-01 | c | 2.4E+00 | c | 4.3E+00 | c | | 9.5E-04 | c | |
| 7.0E-04 | I | | | 7.0E-03 | I | | | | | 1 | 0.1 | | Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209) | 1163-19-5 | 4.4E+02 | n | 3.3E+03 | c** | | | | | 1.1E+02 | c** | | 6.2E+01 | c** | |
| | | | | 4.0E-05 | I | | | | | 1 | 0.1 | | Demeton | 8065-48-3 | 2.5E+00 | n | 3.3E+01 | n | | | | | 4.2E-01 | n | | | | |
| 1.2E-03 | I | | | 6.0E-01 | I | | | | | 1 | 0.1 | | Di(2-ethylhexyl)adipate | 103-23-1 | 4.5E+02 | c* | 1.9E+03 | c | | | | | 6.5E+01 | c | 4.0E+02 | 4.7E+00 | c | 2.9E+01 |
| 6.1E-02 | H | | | | | | | | | 1 | 0.1 | | Diallate | 2303-16-4 | 8.9E+00 | c | 3.8E+01 | c | | | | | 5.4E-01 | c | | 8.0E-04 | c | |
| | | | | 7.0E-04 | A | | | | | 1 | 0.1 | | Diazinon | 333-41-5 | 4.4E+01 | n | 5.7E+02 | n | | | | | 1.0E+01 | n | | 6.5E-02 | n | |
| | | | | 1.0E-02 | X | | | V | | 1 | | | Dibenzothiophene | 132-65-0 | 7.8E+02 | n | 1.2E+04 | n | | | | | 6.5E+01 | n | | 1.2E+00 | n | |
| 8.0E-01 | P | 6.0E-03 | P | 2.0E-04 | P | 2.0E-04 | I | V | M | 1 | | 9.8E+02 | Dibromo-3-chloropropane, 1,2- | 96-12-8 | 5.3E-03 | c | 6.4E-02 | c | 1.7E-04 | c | 2.0E-03 | c | 3.3E-04 | c | 2.0E-01 | 1.4E-07 | c | 8.6E-05 |
| | | | | | | | | | | 1 | 0.1 | | Dibromoacetic acid | 631-64-1 | | | | | | | | | | | 6.0E+01(G) | | | 1.2E-02 |
| | | | | 4.0E-04 | X | | | V | | 1 | | 1.6E+02 | Dibromobenzene, 1,3- | 108-36-1 | 3.1E+01 | n | 4.7E+02 | ns | | | | | 5.3E+00 | n | | 5.1E-03 | n | |
| | | | | 1.0E-02 | I | | | V | | 1 | | | Dibromobenzene, 1,4- | 106-37-6 | 7.8E+02 | n | 1.2E+04 | n | | | | | 1.3E+02 | n | | 1.2E-01 | n | |
| 8.4E-02 | I | | | 2.0E-02 | I | | | V | | 1 | | 8.0E+02 | Dibromochloromethane | 124-48-1 | 8.3E+00 | c | 3.9E+01 | c | | | | | 8.7E-01 | c | 8.0E+01(G) | 2.3E-04 | c | 2.1E-02 |
| 2.0E+00 | I | 6.0E-04 | I | 9.0E-03 | I | 9.0E-03 | I | V | | 1 | | 1.3E+03 | Dibromoethane, 1,2- | 106-93-4 | 3.6E-02 | c | 1.6E-01 | c | 4.7E-03 | c | 2.0E-02 | c | 7.5E-03 | c | 5.0E-02 | 2.1E-06 | c | 1.4E-05 |
| | | | | | | 4.0E-03 | X | V | | 1 | | 2.8E+03 | Dibromomethane (Methylene Bromide) | 74-95-3 | 2.4E+01 | n | 9.9E+01 | n | 4.2E+00 | n | 1.8E+01 | n | 8.3E+00 | n | | 2.1E-03 | n | |
| | | | | 3.0E-04 | P | | | | | 1 | 0.1 | | Dibutyltin Compounds | E1790660 | 1.9E+01 | n | 2.5E+02 | n | | | | | 6.0E+00 | n | | | | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Dicamba | 1918-00-9 | 1.9E+03 | n | 2.5E+04 | n | | | | | 5.7E+02 | n | | 1.5E-01 | n | |
| | | | | | | | | | | | | | Dichloramine | 3400-09-7 | | | | | | | | | | | 4.0E+03(G) | | | |
| | | 4.2E-03 | P | | | | | V | | 1 | | 5.5E+02 | Dichloro-2-butene, 1,4- | 764-41-0 | 2.1E-03 | c | 9.4E-03 | c | 6.7E-04 | c | 2.9E-03 | c | 1.3E-03 | c | | 6.6E-07 | c | |
| | | 4.2E-03 | P | | | | | V | | 1 | | 5.2E+02 | Dichloro-2-butene, cis-1,4- | 1476-11-5 | 7.4E-03 | c | 3.2E-02 | c | 6.7E-04 | c | 2.9E-03 | c | 1.3E-03 | c | | 6.2E-07 | c | |
| | | 4.2E-03 | P | | | | | V | | 1 | | 7.6E+02 | Dichloro-2-butene, trans-1,4- | 110-57-6 | 7.4E-03 | c | 3.2E-02 | c | 6.7E-04 | c | 2.9E-03 | c | 1.3E-03 | c | | 6.2E-07 | c | |
| 5.0E-02 | I | | | 4.0E-03 | I | | | | | 1 | 0.1 | | Dichloroacetic Acid | 79-43-6 | 1.1E+01 | c* | 4.6E+01 | c* | | | | | 1.5E+00 | c* | 6.0E+01(G) | 3.1E-04 | c* | 1.2E-02 |
| | | | | 9.0E-02 | I | 2.0E-01 | H | V | | 1 | | 3.8E+02 | Dichlorobenzene, 1,2- | 95-50-1 | 1.8E+03 | ns | 9.3E+03 | ns | 2.1E+02 | n | 8.8E+02 | n | 3.0E+02 | n | 6.0E+02 | 3.0E-01 | n | 5.8E-01 |
| 5.4E-03 | C | 1.1E-05 | C | 7.0E-02 | A | 8.0E-01 | I | V | | 1 | | | Dichlorobenzene, 1,4- | 106-46-7 | 2.6E+00 | c | 1.1E+01 | c | 2.6E-01 | c | 1.1E+00 | c | 4.8E-01 | c | 7.5E+01 | 4.6E-04 | c | 7.2E-02 |
| 4.5E-01 | I | 3.4E-04 | C | | | | | | | 1 | 0.1 | | Dichlorobenzidine, 3,3'- | 91-94-1 | 1.2E+00 | c | 5.1E+00 | c | 8.3E-03 | c | 3.6E-02 | c | 1.3E-01 | c | | 8.2E-04 | c | |
| | | | | 9.0E-03 | X | | | | | 1 | 0.1 | | Dichlorobenzophenone, 4,4'- | 90-98-2 | 5.7E+02 | n | 7.4E+03 | n | | | | | 7.8E+01 | n | | 4.7E-01 | n | |
| | | | | 2.0E-01 | I | 1.0E-01 | X | V | | 1 | | 8.5E+02 | Dichlorodifluoromethane | 75-71-8 | 8.7E+01 | n | 3.7E+02 | n | 1.0E+02 | n | 4.4E+02 | n | 2.0E+02 | n | | 3.0E-01 | n | |
| 5.7E-03 | C | 1.6E-06 | C | 2.0E-01 | P | | | V | | 1 | | 1.7E+03 | Dichloroethane, 1,1- | 75-34-3 | 3.6E+00 | c | 1.6E+01 | c | 1.8E+00 | c | 7.7E+00 | c | 2.8E+00 | c | | 7.8E-04 | c | |
| 9.1E-02 | I | 2.6E-05 | I | 6.0E-03 | X | 7.0E-03 | P | V | | 1 | | 3.0E+03 | Dichloroethane, 1,2- | 107-06-2 | 4.6E-01 | c* | 2.0E+00 | c* | 1.1E-01 | c* | 4.7E-01 | c* | 1.7E-01 | c* | 5.0E+00 | 4.8E-05 | c* | 1.4E-03 |
| | | | | 5.0E-02 | I | 2.0E-01 | I | V | | 1 | | 1.2E+03 | Dichloroethylene, 1,1- | 75-35-4 | 2.3E+02 | n | 1.0E+03 | n | 2.1E+02 | n | 8.8E+02 | n | 2.8E+02 | n | 7.0E+00 | 1.0E-01 | n | 2.5E-03 |
| | | | | 2.0E-03 | I | | | V | | 1 | | 2.4E+03 | Dichloroethylene, cis-1,2- | 156-59-2 | 1.6E+02 | n | 2.3E+03 | n | | | | | 3.6E+01 | n | 7.0E+01 | 1.1E-02 | n | 2.1E-02 |
| | | | | 2.0E-02 | I | 4.0E-02 | X | V | | 1 | | 1.9E+03 | Dichloroethylene, trans-1,2- | 156-60-5 | 7.0E+01 | n | 3.0E+02 | n | 4.2E+01 | n | 1.8E+02 | n | 6.8E+01 | n | 1.0E+02 | 2.1E-02 | n | 3.1E-02 |
| | | | | 3.0E-03 | I | | | | | 1 | 0.1 | | Dichlorophenol, 2,4- | 120-83-2 | 1.9E+02 | n | 2.5E+03 | n | | | | | 4.6E+01 | n | | 2.3E-02 | n | |

TR=1E-06
THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | volatile | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 1.0E-02 | I | | | | | 1 | 0.05 | | Dichlorophenoxy Acetic Acid, 2,4- | 94-75-7 | 7.0E+02 | n | 9.6E+03 | n | | | | | 1.7E+02 | n | 7.0E+01 | 4.5E-02 | n | 1.8E-02 |
| 3.7E-02 | P | 3.7E-06 | P | 4.0E-02 | P | 4.0E-03 | I | V | | 1 | | 1.4E+03 | Dichloropropane, 1,2- | 78-87-5 | 2.5E+00 | c** | 1.1E+01 | c** | 7.6E-01 | c** | 3.3E+00 | c** | 8.5E-01 | c** | 5.0E+00 | 2.8E-04 | c** | 1.7E-03 |
| | | | | 2.0E-02 | P | | | V | | 1 | | 1.5E+03 | Dichloropropane, 1,3- | 142-28-9 | 1.6E+03 | ns | 2.3E+04 | ns | | | | | 3.7E+02 | n | | 1.3E-01 | n | |
| | | | | 3.0E-03 | I | | | | | 1 | 0.1 | | Dichloropropanol, 2,3- | 616-23-9 | 1.9E+02 | n | 2.5E+03 | n | | | | | 5.9E+01 | n | | 1.3E-02 | n | |
| 1.0E-01 | I | 4.0E-06 | I | 3.0E-02 | I | 2.0E-02 | I | V | | 1 | | 1.6E+03 | Dichloropropene, 1,3- | 542-75-6 | 1.8E+00 | c* | 8.2E+00 | c* | 7.0E-01 | c* | 3.1E+00 | c* | 4.7E-01 | c* | | 1.7E-04 | c* | |
| 2.9E-01 | I | 8.3E-05 | C | 5.0E-04 | I | 5.0E-04 | I | | | 1 | 0.1 | | Dichlorvos | 62-73-7 | 1.9E+00 | c* | 7.9E+00 | c* | 3.4E-02 | c* | 1.5E-01 | c* | 2.6E-01 | c* | | 8.1E-05 | c* | |
| | | | | 3.0E-05 | O | | | | | 1 | 0.1 | | Dicrotophos | 141-66-2 | 1.9E+00 | n | 2.5E+01 | n | | | | | 6.0E-01 | n | | 1.4E-04 | n | |
| | | | | 8.0E-02 | P | 3.0E-04 | X | V | | 1 | | 2.6E+02 | Dicyclopentadiene | 77-73-6 | 1.3E+00 | n | 5.4E+00 | n | 3.1E-01 | n | 1.3E+00 | n | 6.3E-01 | n | | 2.2E-03 | n | |
| 1.6E+01 | I | 4.6E-03 | I | 5.0E-05 | I | | | | | 1 | 0.1 | | Dieldrin | 60-57-1 | 3.4E-02 | c* | 1.4E-01 | c | 6.1E-04 | c | 2.7E-03 | c | 1.8E-03 | c | | 7.1E-05 | c | |
| | | 3.0E-04 | C | | | 5.0E-03 | I | | | 1 | 0.1 | | Diesel Engine Exhaust | E17136615 | | | | | 9.4E-03 | c | 4.1E-02 | c | | | | | | |
| | | | | 2.0E-03 | P | 2.0E-04 | P | | | 1 | 0.1 | | Diethanolamine | 111-42-2 | 1.3E+02 | n | 1.6E+03 | n | 2.1E-01 | n | 8.8E-01 | n | 4.0E+01 | n | | 8.1E-03 | n | |
| | | | | 3.0E-02 | P | 1.0E-04 | P | | | 1 | 0.1 | | Diethylene Glycol Monobutyl Ether | 112-34-5 | 1.9E+03 | n | 2.4E+04 | n | 1.0E-01 | n | 4.4E-01 | n | 6.0E+02 | n | | 1.3E-01 | n | |
| | | | | 6.0E-02 | P | 3.0E-04 | P | | | 1 | 0.1 | | Diethylene Glycol Monoethyl Ether | 111-90-0 | 3.8E+03 | n | 4.8E+04 | n | 3.1E-01 | n | 1.3E+00 | n | 1.2E+03 | n | | 2.4E-01 | n | |
| | | | | 1.0E-03 | P | | | V | | 1 | | 1.1E+05 | Diethylformamide | 617-84-5 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | | 4.1E-03 | n | |
| 3.5E+02 | C | 1.0E-01 | C | | | | | | | 1 | 0.1 | | Diethylstilbestrol | 56-53-1 | 1.6E-03 | c | 6.6E-03 | c | 2.8E-05 | c | 1.2E-04 | c | 5.1E-05 | c | | 2.8E-05 | c | |
| | | | | 8.3E-02 | O | | | | | 1 | 0.1 | | Difenzoquat | 43222-48-6 | 5.2E+03 | n | 6.8E+04 | n | | | | | 1.7E+03 | n | | 2.6E+02 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Diflubenzuron | 35367-38-5 | 1.3E+03 | n | 1.6E+04 | n | | | | | 2.9E+02 | n | | 3.3E-01 | n | |
| | | | | | | 4.0E+01 | I | V | | 1 | | 1.4E+03 | Difluoroethane, 1,1- | 75-37-6 | 4.8E+04 | ns | 2.0E+05 | nms | 4.2E+04 | n | 1.8E+05 | n | 8.3E+04 | n | | 2.8E+01 | n | |
| | | | | | | 3.0E+01 | X | V | | 1 | | 6.9E+02 | Difluoropropane, 2,2- | 420-45-1 | 2.4E+04 | ns | 1.0E+05 | ns | 3.1E+04 | n | 1.3E+05 | n | 6.3E+04 | n | | 1.4E+02 | n | |
| 4.4E-02 | C | 1.3E-05 | C | | | | | V | | 1 | | | Dihydrosafrole | 94-58-6 | 9.9E+00 | c | 4.5E+01 | c | 2.2E-01 | c | 9.4E-01 | c | 3.0E-01 | c | | 1.9E-04 | c | |
| | | | | | | 7.0E-01 | P | V | | 1 | | 2.3E+03 | Diisopropyl Ether | 108-20-3 | 2.2E+03 | n | 9.4E+03 | ns | 7.3E+02 | n | 3.1E+03 | n | 1.5E+03 | n | | 3.7E-01 | n | |
| | | | | 8.0E-02 | I | | | V | | 1 | | 5.3E+02 | Diisopropyl Methylphosphonate | 1445-75-6 | 6.3E+03 | ns | 9.3E+04 | ns | | | | | 1.6E+03 | n | | 4.5E-01 | n | |
| | | | | 2.2E-02 | O | | | | | 1 | 0.1 | | Dimethipin | 55290-64-7 | 1.4E+03 | n | 1.8E+04 | n | | | | | 4.4E+02 | n | | 9.6E-02 | n | |
| | | | | 2.2E-03 | O | | | | | 1 | 0.1 | | Dimethoate | 60-51-5 | 1.4E+02 | n | 1.8E+03 | n | | | | | 4.4E+01 | n | | 9.9E-03 | n | |
| 1.6E+00 | P | | | | | | | | | 1 | 0.1 | | Dimethoxybenzidine, 3,3'- | 119-90-4 | 3.4E-01 | c | 1.4E+00 | c | | | | | 4.7E-02 | c | | 5.8E-05 | c | |
| 1.7E-03 | P | | | 6.0E-02 | P | | | | | 1 | 0.1 | | Dimethyl methylphosphonate | 756-79-6 | 3.2E+02 | c* | 1.4E+03 | c* | | | | | 4.6E+01 | c* | | 9.6E-03 | c* | |
| 4.6E+00 | C | 1.3E-03 | C | | | | | | | 1 | 0.1 | | Dimethylamino azobenzene [p-] | 60-11-7 | 1.2E-01 | c | 5.0E-01 | c | 2.2E-03 | c | 9.4E-03 | c | 5.0E-03 | c | | 2.1E-05 | c | |
| 5.8E-01 | H | | | | | | | | | 1 | 0.1 | | Dimethylaniline HCl, 2,4- | 21436-96-4 | 9.4E-01 | c | 4.0E+00 | c | | | | | 1.3E-01 | c | | 1.2E-04 | c | |
| 2.0E-01 | P | | | 2.0E-03 | X | | | | | 1 | 0.1 | | Dimethylaniline, 2,4- | 95-68-1 | 2.7E+00 | c* | 1.1E+01 | c | | | | | 3.7E-01 | c | | 2.1E-04 | c | |
| 2.7E-02 | P | | | 2.0E-03 | I | | | V | | 1 | | 8.3E+02 | Dimethylaniline, N,N- | 121-69-7 | 2.6E+01 | c** | 1.2E+02 | c* | | | | | 2.5E+00 | c* | | 9.0E-04 | c* | |
| 1.1E+01 | P | | | | | | | | | 1 | 0.1 | | Dimethylbenzidine, 3,3'- | 119-93-7 | 4.9E-02 | c | 2.1E-01 | c | | | | | 6.5E-03 | c | | 4.3E-05 | c | |
| | | | | 1.0E-01 | P | 3.0E-02 | I | V | | 1 | | 1.1E+05 | Dimethylformamide | 68-12-2 | 2.6E+03 | n | 1.5E+04 | n | 3.1E+01 | n | 1.3E+02 | n | 6.1E+01 | n | | 1.2E-02 | n | |
| | | | | 1.0E-04 | X | 2.0E-06 | X | V | | 1 | | 1.7E+05 | Dimethylhydrazine, 1,1- | 57-14-7 | 5.7E-02 | n | 2.4E-01 | n | 2.1E-03 | n | 8.8E-03 | n | 4.2E-03 | n | | 9.3E-07 | n | |
| 5.5E+02 | C | 1.6E-01 | C | | | | | V | | 1 | | 1.9E+05 | Dimethylhydrazine, 1,2- | 540-73-8 | 8.8E-04 | c | 4.1E-03 | c | 1.8E-05 | c | 7.7E-05 | c | 2.8E-05 | c | | 6.5E-09 | c | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Dimethylphenol, 2,4- | 105-67-9 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.6E+02 | n | | 4.2E-01 | n | |
| | | | | 6.0E-04 | I | | | | | 1 | 0.1 | | Dimethylphenol, 2,6- | 576-26-1 | 3.8E+01 | n | 4.9E+02 | n | | | | | 1.1E+01 | n | | 1.3E-02 | n | |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | Dimethylphenol, 3,4- | 95-65-8 | 6.3E+01 | n | 8.2E+02 | n | | | | | 1.8E+01 | n | | 2.1E-02 | n | |
| 4.5E-02 | C | 1.3E-05 | C | | | | | V | | 1 | | 4.7E+02 | Dimethylvinylchloride | 513-37-1 | 1.1E+00 | c | 4.8E+00 | c | 2.2E-01 | c | 9.4E-01 | c | 3.3E-01 | c | | 1.1E-04 | c | |
| | | | | 8.0E-05 | X | | | | | 1 | 0.1 | | Dinitro-o-cresol, 4,6- | 534-52-1 | 5.1E+00 | n | 6.6E+01 | n | | | | | 1.5E+00 | n | | 2.6E-03 | n | |
| | | | | 2.0E-03 | I | | | | | 1 | 0.1 | | Dinitro-o-cyclohexyl Phenol, 4,6- | 131-89-5 | 1.3E+02 | n | 1.6E+03 | n | | | | | 2.3E+01 | n | | 7.7E-01 | n | |
| | | | | 1.0E-04 | P | | | | | 1 | 0.1 | | Dinitrobenzene, 1,2- | 528-29-0 | 6.3E+00 | n | 8.2E+01 | n | | | | | 1.9E+00 | n | | 1.8E-03 | n | |
| | | | | 1.0E-04 | I | | | | | 1 | 0.1 | | Dinitrobenzene, 1,3- | 99-65-0 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 1.8E-03 | n | |
| | | | | 1.0E-04 | P | | | | | 1 | 0.1 | | Dinitrobenzene, 1,4- | 100-25-4 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 1.8E-03 | n | |
| | | | | 2.0E-03 | I | | | | | 1 | 0.1 | | Dinitrophenol, 2,4- | 51-28-5 | 1.3E+02 | n | 1.6E+03 | n | | | | | 3.9E+01 | n | | 4.4E-02 | n | |
| 6.8E-01 | I | | | | | | | | | 1 | 0.1 | | Dinitrotoluene Mixture, 2,4/2,6- | E1615210 | 8.0E-01 | c | 3.4E+00 | c | | | | | 1.1E-01 | c | | 1.5E-04 | c | |
| 3.1E-01 | C | 8.9E-05 | C | 2.0E-03 | I | | | | | 1 | 0.102 | | Dinitrotoluene, 2,4- | 121-14-2 | 1.7E+00 | c* | 7.4E+00 | c | 3.2E-02 | c | 1.4E-01 | c | 2.4E-01 | c | | 3.2E-04 | c | |
| 1.5E+00 | P | | | 3.0E-04 | X | | | | | 1 | 0.099 | | Dinitrotoluene, 2,6- | 606-20-2 | 3.6E-01 | c* | 1.5E+00 | c | | | | | 4.9E-02 | c | | 6.7E-05 | c | |
| | | | | 1.0E-04 | X | | | | | 1 | 0.006 | | Dinitrotoluene, 2-Amino-4,6- | 35572-78-2 | 7.7E+00 | n | 1.1E+02 | n | | | | | 1.9E+00 | n | | 1.5E-03 | n | |
| | | | | 1.0E-04 | X | | | | | 1 | 0.009 | | Dinitrotoluene, 4-Amino-2,6- | 19406-51-0 | 7.7E+00 | n | 1.1E+02 | n | | | | | 1.9E+00 | n | | 1.5E-03 | n | |
| 4.5E-01 | X | | | 9.0E-04 | X | | | | | 1 | 0.1 | | Dinitrotoluene, Technical grade | 25321-14-6 | 1.2E+00 | c* | 5.1E+00 | c | | | | | 1.0E-01 | c | | 1.4E-04 | c | |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | Dinoseb | 88-85-7 | 6.3E+01 | n | 8.2E+02 | n | | | | | 1.5E+01 | n | 7.0E+00 | 1.3E-01 | n | 6.2E-02 |
| 1.0E-01 | I | 5.0E-06 | I | 3.0E-02 | I | 3.0E-02 | I | V | | 1 | | 1.2E+05 | Dioxane, 1,4- | 123-91-1 | 5.3E+00 | c | 2.4E+01 | c | 5.6E-01 | c* | 2.5E+00 | c* | 4.6E-01 | c | | 9.4E-05 | c | |
| | | | | | | | | | | | | | Dioxins | | | | | | | | | | | | | | | |
| 6.2E+03 | I | 1.3E+00 | I | | | | | | | 1 | 0.03 | | ~Hexachlorodibenzo-p-dioxin, Mixture | 34465-46-8 | 1.0E-04 | c | 4.7E-04 | c | 2.2E-06 | c | 9.4E-06 | c | 1.3E-05 | c | | 1.7E-05 | c | |
| 1.3E+05 | C | 3.8E+01 | C | 7.0E-10 | I | 4.0E-08 | C | V | | 1 | 0.03 | | ~TCDD, 2,3,7,8- | 1746-01-6 | 4.8E-06 | c* | 2.2E-05 | c* | 7.4E-08 | c | 3.2E-07 | c | 1.2E-07 | c | 3.0E-05 | 5.9E-08 | c | 1.5E-05 |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Diphenamid | 957-51-7 | 1.9E+03 | n | 2.5E+04 | n | | | | | 5.3E+02 | n | | 5.2E+00 | n | |
| | | | | | | 4.0E-04 | X | V | | 1 | | | Diphenyl Ether | 101-84-8 | 3.4E+01 | n | 1.4E+02 | n | 4.2E-01 | n | 1.8E+00 | n | 8.3E-01 | n | | 3.4E-03 | n | |
| | | | | 8.0E-04 | X | | | | | 1 | 0.1 | | Diphenyl Sulfone | 127-63-9 | 5.1E+01 | n | 6.6E+02 | n | | | | | 1.5E+01 | n | | 3.6E-02 | n | |
| | | | | 1.0E-01 | O | | | | | 1 | 0.1 | | Diphenylamine | 122-39-4 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.3E+03 | n | | 2.3E+00 | n | |
| 8.0E-01 | I | 2.2E-04 | I | | | | | | | 1 | 0.1 | | Diphenylhydrazine, 1,2- | 122-66-7 | 6.8E-01 | c | 2.9E+00 | c | 1.3E-02 | c | 5.6E-02 | c | 7.8E-02 | c | | 2.5E-04 | c | |
| | | | | 2.2E-03 | I | | | | | 1 | 0.1 | | Diquat | 2764-72-9 | 1.4E+02 | n | 1.8E+03 | n | | | | | 4.0E+01 | n | 2.0E+01 | 3.3E-01 | n | 1.7E-01 |
| 7.4E+00 | C | 2.1E-03 | C | | | | | | | 1 | 0.1 | | Direct Black 38 | 1937-37-7 | 7.3E-02 | c | 3.1E-01 | c | 1.3E-03 | c | 5.8E-03 | c | 1.1E-02 | c | | 5.1E+00 | c | |
| 7.4E+00 | C | 2.1E-03 | C | | | | | | | 1 | 0.1 | | Direct Blue 6 | 2602-46-2 | 7.3E-02 | c | 3.1E-01 | c | 1.3E-03 | c | 5.8E-03 | c | 1.1E-02 | c | | 1.7E+01 | c | |
| 6.7E+00 | C | 1.9E-03 | C | | | | | | | 1 | 0.1 | | Direct Brown 95 | 16071-86-6 | 8.1E-02 | c | 3.4E-01 | c | 1.5E-03 | c | 6.5E-03 | c | 1.2E-02 | c | | 1.6E-01 | c | |
| | | | | 4.0E-05 | I | | | | | 1 | 0.1 | | Disulfoton | 298-04-4 | 2.5E+00 | n | 3.3E+01 | n | | | | | 5.0E-01 | n | | 9.4E-04 | n | |
| | | | | 1.0E-02 | I | | | V | | 1 | | | Dithiane, 1,4- | 505-29-3 | 7.8E+02 | n | 1.2E+04 | n | | | | | 2.0E+02 | n | | 9.7E-02 | n | |
| | | | | 2.0E-03 | I | | | | | 1 | 0.1 | | Diuron | 330-54-1 | 1.3E+02 | n | 1.6E+03 | n | | | | | 3.6E+01 | n | | 1.5E-02 | n | |
| | | | | 2.0E-02 | O | | | | | 1 | 0.1 | | Dodine | 2439-10-3 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 2.1E+00 | n | |
| | | | | 5.0E-02 | O | | | V | | 1 | | | EPTC | 759-94-4 | 3.9E+03 | n | 5.8E+04 | n | | | | | 7.5E+02 | n | | 4.0E-01 | n | |
| | | | | 6.0E-03 | I | | | V | | 1 | | | Endosulfan | 115-29-7 | 4.7E+02 | n | 7.0E+03 | n | | | | | 1.0E+02 | n | | 1.4E+00 | n | |
| | | | | 6.0E-03 | P | | | | | 1 | 0.1 | | Endosulfan Sulfate | 1031-07-8 | 3.8E+02 | n | 4.9E+03 | n | | | | | 1.1E+02 | n | | 2.1E+00 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Endothall | 145-73-3 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.8E+02 | n | 1.0E+02 | 9.1E-02 | n | 2.4E-02 |
| | | | | 3.0E-04 | I | | | | | 1 | 0.1 | | Endrin | 72-20-8 | 1.9E+01 | n | 2.5E+02 | n | | | | | 2.3E+00 | n | 2.0E+00 | 9.2E-02 | n | 8.1E-02 |
| 9.9E-03 | I | 1.2E-06 | I | 6.0E-03 | P | 1.0E-03 | I | V | | 1 | | 1.1E+04 | Epichlorohydrin | 106-89-8 | 1.9E+01 | n | 8.2E+01 | n | 1.0E+00 | n | 4.4E+00 | n | 2.0E+00 | n | | 4.5E-04 | n | |
| | | | | | | 2.0E-02 | I | V | | 1 | | 1.5E+04 | Epoxybutane, 1,2- | 106-88-7 | 1.6E+02 | n | 6.7E+02 | n | 2.1E+01 | n | 8.8E+01 | n | 4.2E+01 | n | | 9.2E-03 | n | |
| | | | | 4.0E-02 | P | | | | | 1 | 0.1 | | Ethanol, 2-(2-methoxyethoxy)- | 111-77-3 | 2.5E+03 | n | 3.3E+04 | n | | | | | 8.0E+02 | n | | 1.6E-01 | n | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Ethephon | 16672-87-0 | 3.2E+02 | n | 4.1E+03 | n | | | | | 1.0E+02 | n | | 2.1E-02 | n | |

TR=1E-06 THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | volatile | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 5.0E-04 | I | | | | | 1 | 0.1 | | Ethion | 563-12-2 | 3.2E+01 | n | 4.1E+02 | n | | | | | 4.3E+00 | n | | 8.5E-03 | n | |
| | | | | 1.0E-01 | P | 6.0E-02 | P | V | | 1 | | 2.4E+04 | Ethoxyethanol Acetate, 2- | 111-15-9 | 2.6E+03 | n | 1.4E+04 | n | 6.3E+01 | n | 2.6E+02 | n | 1.2E+02 | n | | 2.5E-02 | n | |
| | | | | 9.0E-02 | P | 2.0E-01 | I | V | | 1 | | 1.1E+05 | Ethoxyethanol, 2- | 110-80-5 | 5.2E+03 | n | 4.7E+04 | n | 2.1E+02 | n | 8.8E+02 | n | 3.4E+02 | n | | 6.8E-02 | n | |
| | | | | 9.0E-01 | I | 7.0E-02 | P | V | | 1 | | 1.1E+04 | Ethyl Acetate | 141-78-6 | 6.2E+02 | n | 2.6E+03 | n | 7.3E+01 | n | 3.1E+02 | n | 1.4E+02 | n | | 3.1E-02 | n | |
| | | | | 5.0E-03 | P | 8.0E-03 | P | V | | 1 | | 2.5E+03 | Ethyl Acrylate | 140-88-5 | 4.7E+01 | n | 2.1E+02 | n | 8.3E+00 | n | 3.5E+01 | n | 1.4E+01 | n | | 3.2E-03 | n | |
| | | | | | | 1.0E+01 | I | V | | 1 | | 2.1E+03 | Ethyl Chloride (Chloroethane) | 75-00-3 | 1.4E+04 | ns | 5.7E+04 | ns | 1.0E+04 | n | 4.4E+04 | n | 2.1E+04 | n | | 5.9E+00 | n | |
| | | | | 2.0E-01 | I | | | V | | 1 | | 1.0E+04 | Ethyl Ether | 60-29-7 | 1.6E+04 | ns | 2.3E+05 | nms | | | | | 3.9E+03 | n | | 8.8E-01 | n | |
| | | | | | | 3.0E-01 | P | V | | 1 | | 1.1E+03 | Ethyl Methacrylate | 97-63-2 | 1.8E+03 | ns | 7.6E+03 | ns | 3.1E+02 | n | 1.3E+03 | n | 6.3E+02 | n | | 1.5E-01 | n | |
| | | | | 1.0E-05 | I | | | | | 1 | 0.1 | | Ethyl-p-nitrophenyl Phosphonate | 2104-64-5 | 6.3E-01 | n | 8.2E+00 | n | | | | | 8.9E-02 | n | | 2.8E-03 | n | |
| 1.1E-02 | C | 2.5E-06 | C | 1.0E-01 | I | 1.0E+00 | I | V | | 1 | | 4.8E+02 | Ethylbenzene | 100-41-4 | 5.8E+00 | c | 2.5E+01 | c | 1.1E+00 | c | 4.9E+00 | c | 1.5E+00 | c | 7.0E+02 | 1.7E-03 | c | 7.8E-01 |
| | | | | 7.0E-02 | P | | | | | 1 | 0.1 | | Ethylene Cyanohydrin | 109-78-4 | 4.4E+03 | n | 5.7E+04 | n | | | | | 1.4E+03 | n | | 2.8E-01 | n | |
| | | | | 9.0E-02 | P | | | V | | 1 | | 1.9E+05 | Ethylene Diamine | 107-15-3 | 7.0E+03 | n | 1.1E+05 | nm | | | | | 1.8E+03 | n | | 4.1E-01 | n | |
| | | | | 2.0E+00 | I | 4.0E-01 | C | | | 1 | 0.1 | | Ethylene Glycol | 107-21-1 | 1.3E+05 | nm | 1.6E+06 | nm | 4.2E+02 | n | 1.8E+03 | n | 4.0E+04 | n | | 8.1E+00 | n | |
| | | | | 1.0E-01 | I | 1.6E+00 | I | | | 1 | 0.1 | | Ethylene Glycol Monobutyl Ether | 111-76-2 | 6.3E+03 | n | 8.2E+04 | n | 1.7E+03 | n | 7.0E+03 | n | 2.0E+03 | n | | 4.1E-01 | n | |
| 3.1E-01 | C | 3.0E-03 | I | | | 3.0E-02 | C | V | M | 1 | | 1.2E+05 | Ethylene Oxide | 75-21-8 | 2.0E-03 | c | 2.5E-02 | c | 3.4E-04 | c | 4.1E-03 | c | 6.7E-04 | c | | 1.4E-07 | c | |
| 4.5E-02 | C | 1.3E-05 | C | 8.0E-05 | I | | | | | 1 | 0.1 | | Ethylene Thiourea | 96-45-7 | 5.1E+00 | n | 5.1E+01 | c** | 2.2E-01 | c | 9.4E-01 | c | 1.6E+00 | n | | 3.6E-04 | n | |
| 6.5E+01 | C | 1.9E-02 | C | | | | | V | | 1 | | 1.5E+05 | Ethyleneimine | 151-56-4 | 2.7E-03 | c | 1.2E-02 | c | 1.5E-04 | c | 6.5E-04 | c | 2.4E-04 | c | | 5.2E-08 | c | |
| | | | | 3.0E+00 | I | | | | | 1 | 0.1 | | Ethylphthalyl Ethyl Glycolate | 84-72-0 | 1.9E+05 | nm | 2.5E+06 | nm | | | | | 5.8E+04 | n | | 1.3E+02 | n | |
| | | | | 2.5E-04 | I | | | | | 1 | 0.1 | | Fenamiphos | 22224-92-6 | 1.6E+01 | n | 2.1E+02 | n | | | | | 4.4E+00 | n | | 4.3E-03 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Fenpropathrin | 39515-41-8 | 1.6E+03 | n | 2.1E+04 | n | | | | | 6.4E+01 | n | | 2.9E+00 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Fenvalerate | 51630-58-1 | 1.6E+03 | n | 2.1E+04 | n | | | | | 5.0E+02 | n | | 3.2E+02 | n | |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Fluometuron | 2164-17-2 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.4E+02 | n | | 1.9E-01 | n | |
| | | | | 4.0E-02 | C | 1.3E-02 | C | | | 1 | | | Fluoride | 16984-48-8 | 3.1E+03 | n | 4.7E+04 | n | 1.4E+01 | n | 5.7E+01 | n | 8.0E+02 | n | 4.0E+03 | 1.2E+02 | n | 6.0E+02 |
| | | | | 6.0E-02 | I | 1.3E-02 | C | | | 1 | | | Fluorine (Soluble Fluoride) | 7782-41-4 | 4.7E+03 | n | 7.0E+04 | n | 1.4E+01 | n | 5.7E+01 | n | 1.2E+03 | n | 4.0E+03 | 1.8E+02 | n | 6.0E+02 |
| | | | | 8.0E-02 | I | | | | | 1 | 0.1 | | Fluridone | 59756-60-4 | 5.1E+03 | n | 6.6E+04 | n | | | | | 1.4E+03 | n | | 1.6E+02 | n | |
| | | | | 4.0E-02 | O | | | | | 1 | 0.1 | | Flurprimidol | 56425-91-3 | 2.5E+03 | n | 3.3E+04 | n | | | | | 6.9E+02 | n | | 3.1E+00 | n | |
| | | | | 2.0E-03 | O | | | | | 1 | 0.1 | | Flusilazole | 85509-19-9 | 1.3E+02 | n | 1.6E+03 | n | | | | | 3.1E+01 | n | | 5.1E+00 | n | |
| | | | | 5.0E-01 | O | | | | | 1 | 0.1 | | Flutolanil | 66332-96-5 | 3.2E+04 | n | 4.1E+05 | nm | | | | | 7.9E+03 | n | | 4.2E+01 | n | |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Fluvalinate | 69409-94-5 | 6.3E+02 | n | 8.2E+03 | n | | | | | 2.0E+02 | n | | 2.9E+02 | n | |
| | | | | 9.0E-02 | O | | | | | 1 | 0.1 | | Folpet | 133-07-3 | 5.7E+03 | n | 7.4E+04 | n | | | | | 1.6E+03 | n | | 3.9E-01 | n | |
| | | | | 2.5E-03 | O | | | | | 1 | 0.1 | | Fomesafen | 72178-02-0 | 1.6E+02 | n | 2.1E+03 | n | | | | | 4.8E+01 | n | | 1.6E-01 | n | |
| | | | | 2.0E-03 | I | | | | | 1 | 0.1 | | Fonofos | 944-22-9 | 1.3E+02 | n | 1.6E+03 | n | | | | | 2.4E+01 | n | | 4.7E-02 | n | |
| 2.1E-02 | C | 1.3E-05 | I | 2.0E-01 | I | 9.8E-03 | A | V | | 1 | | 4.2E+04 | Formaldehyde | 50-00-0 | 1.1E+01 | c* | 5.0E+01 | c* | 2.2E-01 | c* | 9.4E-01 | c* | 3.9E-01 | c* | | 7.8E-05 | c* | |
| | | | | 9.0E-01 | P | 3.0E-04 | X | V | | 1 | | 1.1E+05 | Formic Acid | 64-18-6 | 2.9E+01 | n | 1.2E+02 | n | 3.1E-01 | n | 1.3E+00 | n | 6.3E-01 | n | | 1.3E-04 | n | |
| | | | | 2.5E+00 | O | | | | | 1 | 0.1 | | Fosetyl-AL | 39148-24-8 | 1.6E+05 | nm | 2.1E+06 | nm | | | | | 5.0E+04 | n | | 6.6E+02 | n | |
| | | | | | | | | | | | | | Furans | | | | | | | | | | | | | | | | |
| | | | | 1.0E-03 | X | | | V | | 1 | | | ~Dibenzofuran | 132-64-9 | 7.8E+01 | n | 1.2E+03 | n | | | | | 7.9E+00 | n | | 1.5E-01 | n | |
| | | | | 1.0E-03 | I | | | V | | 1 | | 6.2E+03 | ~Furan | 110-00-9 | 7.8E+01 | n | 1.2E+03 | n | | | | | 1.9E+01 | n | | 7.3E-03 | n | |
| | | | | 9.0E-01 | I | 2.0E+00 | I | V | | 1 | | 1.7E+05 | ~Tetrahydrofuran | 109-99-9 | 1.8E+04 | n | 9.5E+04 | n | 2.1E+03 | n | 8.8E+03 | n | 3.4E+03 | n | | 7.5E-01 | n | |
| 3.8E+00 | H | | | | | | | | | 1 | 0.1 | | Furazolidone | 67-45-8 | 1.4E-01 | c | 6.0E-01 | c | | | | | 2.0E-02 | c | | 3.9E-05 | c | |
| | | | | 3.0E-03 | I | 5.0E-02 | H | V | | 1 | | 1.0E+04 | Furfural | 98-01-1 | 2.1E+02 | n | 2.6E+03 | n | 5.2E+01 | n | 2.2E+02 | n | 3.8E+01 | n | | 8.1E-03 | n | |
| 1.5E+00 | C | 4.3E-04 | C | | | | | | | 1 | 0.1 | | Furium | 531-82-8 | 3.6E-01 | c | 1.5E+00 | c | 6.5E-03 | c | 2.9E-02 | c | 5.1E-02 | c | | 6.8E-05 | c | |
| 3.0E-02 | I | 8.6E-06 | C | | | | | | | 1 | 0.1 | | Furmecyclox | 60568-05-0 | 1.8E+01 | c | 7.7E+01 | c | 3.3E-01 | c | 1.4E+00 | c | 1.1E+00 | c | | 1.2E-03 | c | |
| | | | | 6.0E-03 | O | | | | | 1 | 0.1 | | Glufosinate, Ammonium | 77182-82-2 | 3.8E+02 | n | 4.9E+03 | n | | | | | 1.2E+02 | n | | 2.6E-02 | n | |
| | | | | 1.0E-01 | A | 8.0E-05 | C | | | 1 | 0.1 | | Glutaraldehyde | 111-30-8 | 6.0E+03 | n | 7.0E+04 | n | 8.3E-02 | n | 3.5E-01 | n | 2.0E+03 | n | | 4.0E-01 | n | |
| | | | | 4.0E-04 | I | 1.0E-03 | X | V | | 1 | | 1.1E+05 | Glycidaldehyde | 765-34-4 | 2.3E+01 | n | 2.1E+02 | n | 1.0E+00 | n | 4.4E+00 | n | 1.7E+00 | n | | 3.3E-04 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Glyphosate | 1071-83-6 | 6.3E+03 | n | 8.2E+04 | n | | | | | 2.0E+03 | n | 7.0E+02 | 8.8E+00 | n | 3.1E+00 |
| | | | | 1.0E-02 | X | | | V | | 1 | | | Guanidine | 113-00-8 | 7.8E+02 | n | 1.2E+04 | n | | | | | 2.0E+02 | n | | 4.5E-02 | n | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Guanidine Chloride | 50-01-1 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | | | |
| | | | | 3.0E-02 | X | | | | | 1 | 0.1 | | Guanidine Nitrate | 506-93-4 | 1.9E+03 | n | 2.5E+04 | n | | | | | 6.0E+02 | n | | 1.5E-01 | n | |
| | | | | 5.0E-05 | I | | | | | 1 | 0.1 | | Haloxyfop, Methyl | 69806-40-2 | 3.2E+00 | n | 4.1E+01 | n | | | | | 7.6E-01 | n | | 8.4E-03 | n | |
| 4.5E+00 | I | 1.3E-03 | I | 5.0E-04 | I | | | V | | 1 | | | Heptachlor | 76-44-8 | 1.3E-01 | c | 6.3E-01 | c | 2.2E-03 | c | 9.4E-03 | c | 1.4E-03 | c | 4.0E-01 | 1.2E-04 | c | 3.3E-02 |
| 9.1E+00 | I | 2.6E-03 | I | 1.3E-05 | I | | | V | | 1 | | | Heptachlor Epoxide | 1024-57-3 | 7.0E-02 | c* | 3.3E-01 | c* | 1.1E-03 | c | 4.7E-03 | c | 1.4E-03 | c* | 2.0E-01 | 2.8E-05 | c* | 4.1E-03 |
| | | | | | | 3.0E-03 | X | V | | 1 | | 2.1E+02 | Heptanal, n- | 111-71-7 | 2.4E+01 | n | 1.0E+02 | n | 3.1E+00 | n | 1.3E+01 | n | 6.3E+00 | n | | 1.4E-03 | n | |
| | | | | 3.0E-04 | X | 4.0E-01 | P | V | | 1 | | 5.8E+01 | Heptane, N- | 142-82-5 | 2.2E+01 | n | 2.9E+02 | ns | 4.2E+02 | n | 1.8E+03 | n | 6.0E+00 | n | | 4.8E-02 | n | |
| | | | | 2.0E-03 | I | | | V | | 1 | | | Hexabromobenzene | 87-82-1 | 1.6E+02 | n | 2.3E+03 | n | | | | | 4.0E+01 | n | | 2.3E-01 | n | |
| | | | | 2.0E-04 | I | | | | | 1 | 0.1 | | Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153) | 68631-49-2 | 1.3E+01 | n | 1.6E+02 | n | | | | | 4.0E+00 | n | | | | |
| 1.6E+00 | I | 4.6E-04 | I | 8.0E-04 | I | | | V | | 1 | | | Hexachlorobenzene | 118-74-1 | 2.1E-01 | c | 9.6E-01 | c | 6.1E-03 | c | 2.7E-02 | c | 9.8E-03 | c | 1.0E+00 | 1.2E-04 | c | 1.3E-02 |
| 7.8E-02 | I | 2.2E-05 | I | 1.0E-03 | P | | | V | | 1 | | 1.7E+01 | Hexachlorobutadiene | 87-68-3 | 1.2E+00 | c* | 5.3E+00 | c | 1.3E-01 | c | 5.6E-01 | c | 1.4E-01 | c* | | 2.7E-04 | c* | |
| 6.3E+00 | I | 1.8E-03 | I | 8.0E-03 | A | | | | | 1 | 0.1 | | Hexachlorocyclohexane, Alpha- | 319-84-6 | 8.6E-02 | c | 3.6E-01 | c | 1.6E-03 | c | 6.8E-03 | c | 7.2E-03 | c | | 4.2E-05 | c | |
| 1.8E+00 | I | 5.3E-04 | I | | | | | | | 1 | 0.1 | | Hexachlorocyclohexane, Beta- | 319-85-7 | 3.0E-01 | c | 1.3E+00 | c | 5.3E-03 | c | 2.3E-02 | c | 2.5E-02 | c | | 1.5E-04 | c | |
| 1.1E+00 | C | 3.1E-04 | C | 3.0E-04 | I | | | | | 1 | 0.04 | | Hexachlorocyclohexane, Gamma- (Lindane) | 58-89-9 | 5.7E-01 | c* | 2.5E+00 | c | 9.1E-03 | c | 4.0E-02 | c | 4.2E-02 | c* | 2.0E-01 | 2.4E-04 | c* | 1.2E-03 |
| 1.8E+00 | I | 5.1E-04 | I | | | | | | | 1 | 0.1 | | Hexachlorocyclohexane, Technical | 608-73-1 | 3.0E-01 | c | 1.3E+00 | c | 5.5E-03 | c | 2.4E-02 | c | 2.5E-02 | c | | 1.5E-04 | c | |
| | | | | 6.0E-03 | I | 2.0E-04 | I | V | | 1 | | 1.6E+01 | Hexachlorocyclopentadiene | 77-47-4 | 1.8E+00 | n | 7.5E+00 | n | 2.1E-01 | n | 8.8E-01 | n | 4.1E-01 | n | 5.0E+01 | 1.3E-03 | n | 1.6E-01 |
| 4.0E-02 | I | 1.1E-05 | C | 7.0E-04 | I | 3.0E-02 | I | V | | 1 | | | Hexachloroethane | 67-72-1 | 1.8E+00 | c* | 8.0E+00 | c* | 2.6E-01 | c | 1.1E+00 | c | 3.3E-01 | c* | | 2.0E-04 | c* | |
| | | | | 3.0E-04 | I | | | | | 1 | 0.1 | | Hexachlorophene | 70-30-4 | 1.9E+01 | n | 2.5E+02 | n | | | | | 6.0E+00 | n | | 8.0E+00 | n | |
| 8.0E-02 | I | | | 4.0E-03 | I | | | | | 1 | 0.015 | | Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) | 121-82-4 | 8.3E+00 | c* | 3.8E+01 | c | | | | | 9.7E-01 | c* | | 3.7E-04 | c* | |
| | | | | | | 1.0E-05 | I | V | | 1 | | 3.4E+03 | Hexamethylene Diisocyanate, 1,6- | 822-06-0 | 3.1E+00 | n | 1.3E+01 | n | 1.0E-02 | n | 4.4E-02 | n | 2.1E-02 | n | | 2.1E-04 | n | |
| | | | | | | 4.0E-04 | C | | | 1 | 0.1 | | Hexamethylene diisocyanate biuret | 4035-89-6 | 5.7E+05 | nm | 2.4E+06 | nm | 4.2E-01 | n | 1.8E+00 | n | | | | | | |
| | | | | | | 4.0E-04 | C | | | 1 | 0.1 | | Hexamethylene diisocyanate isocyanurate | 3779-63-3 | 5.7E+05 | nm | 2.4E+06 | nm | 4.2E-01 | n | 1.8E+00 | n | | | | | | |
| | | | | 4.0E-04 | P | | | | | 1 | 0.1 | | Hexamethylphosphoramide | 680-31-9 | 2.5E+01 | n | 3.3E+02 | n | | | | | 8.0E+00 | n | | 1.8E-03 | n | |
| | | 2.0E-07 | X | | | 6.0E-01 | P | V | | 1 | | 1.4E+02 | Hexane, Commercial | E5241997 | 1.2E+01 | c* | 5.1E+01 | c* | 1.4E+01 | c* | 6.1E+01 | c* | 2.8E+01 | c* | | 2.0E-01 | c* | |
| | | | | | | 7.0E-01 | I | V | | 1 | | 1.4E+02 | Hexane, N- | 110-54-3 | 6.1E+02 | ns | 2.5E+03 | ns | 7.3E+02 | n | 3.1E+03 | n | 1.5E+03 | n | | 1.0E+01 | n | |
| | | | | 2.0E+00 | P | | | | | 1 | 0.1 | | Hexanedioic Acid | 124-04-9 | 1.3E+05 | nm | 1.6E+06 | nm | | | | | 4.0E+04 | n | | 9.9E+00 | n | |
| 9.5E-03 | P | | | 7.0E-02 | P | 4.0E-04 | P | V | | 1 | | 2.7E+02 | Hexanol, 1-,2-ethyl- (2-Ethyl-1-hexanol) | 104-76-7 | 1.5E+01 | n | 6.3E+01 | n | 4.2E-01 | n | 1.8E+00 | n | 8.3E-01 | n | | 2.3E-04 | n | |
| | | | | 5.0E-03 | I | 3.0E-02 | I | V | | 1 | | 3.3E+03 | Hexanone, 2- | 591-78-6 | 2.0E+02 | n | 1.3E+03 | n | 3.1E+01 | n | 1.3E+02 | n | 3.8E+01 | n | | 8.8E-03 | n | |
| | | | | 3.3E-02 | I | | | | | 1 | 0.1 | | Hexazinone | 51235-04-2 | 2.1E+03 | n | 2.7E+04 | n | | | | | 6.4E+02 | n | | 3.0E-01 | n | |

TR=1E-06
THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Hexythiazox | 78587-05-0 | 1.6E+03 | n | 2.1E+04 | n | | | | | 1.1E+02 | n | | 5.0E-01 | n | |
| | | | | 1.7E-02 | O | | | | | 1 | 0.1 | | Hydramethylnon | 67485-29-4 | 1.1E+03 | n | 1.4E+04 | n | | | | | 3.4E+02 | n | | 1.2E+05 | n | |
| 3.0E+00 | I | 4.9E-03 | I | | | 3.0E-05 | P | V | | 1 | | 1.1E+05 | Hydrazine | 302-01-2 | 3.2E-02 | c* | 1.4E-01 | c* | 5.7E-04 | c* | 2.5E-03 | c* | 1.1E-03 | c* | | 2.2E-07 | c* | |
| 3.0E+00 | I | 4.9E-03 | I | | | | | | | 1 | | | Hydrazine Sulfate | 10034-93-2 | 2.3E-01 | c | 1.1E+00 | c | 5.7E-04 | c | 2.5E-03 | c | 2.6E-02 | c | | | | |
| | | | | | | 2.0E-02 | I | V | | 1 | | | Hydrogen Chloride | 7647-01-0 | 2.8E+07 | nm | 1.2E+08 | nm | 2.1E+01 | n | 8.8E+01 | n | 4.2E+01 | n | | | | |
| | | | | 4.0E-02 | C | 1.4E-02 | C | V | | 1 | | | Hydrogen Fluoride | 7664-39-3 | 3.1E+03 | n | 4.7E+04 | n | 1.5E+01 | n | 6.1E+01 | n | 2.8E+01 | n | | | | |
| | | | | | | 2.0E-03 | I | V | | 1 | | | Hydrogen Sulfide | 7783-06-4 | 2.8E+06 | nm | 1.2E+07 | nm | 2.1E+00 | n | 8.8E+00 | n | 4.2E+00 | n | | | | |
| 6.0E-02 | P | | | 4.0E-02 | P | | | | | 1 | 0.1 | | Hydroquinone | 123-31-9 | 9.0E+00 | c | 3.8E+01 | c | | | | | 1.3E+00 | c | | 8.7E-04 | c | |
| 6.1E-02 | O | | | 2.5E-03 | O | | | | | 1 | 0.1 | | Imazalil | 35554-44-0 | 8.9E+00 | c* | 3.8E+01 | c* | | | | | 9.0E-01 | c* | | 1.5E-02 | c* | |
| | | | | 2.5E-01 | I | | | | | 1 | 0.1 | | Imazaquin | 81335-37-7 | 1.6E+04 | n | 2.1E+05 | nm | | | | | 4.9E+03 | n | | 2.4E+01 | n | |
| | | | | 2.5E+00 | O | | | | | 1 | 0.1 | | Imazethapyr | 81335-77-5 | 1.6E+05 | nm | 2.1E+06 | nm | | | | | 4.7E+04 | n | | 4.1E+01 | n | |
| | | | | 1.0E-02 | A | | | | | 1 | | | Iodine | 7553-56-2 | 7.8E+02 | n | 1.2E+04 | n | | | | | 2.0E+02 | n | | 1.2E+01 | n | |
| | | | | 4.0E-02 | I | | | | | 1 | 0.1 | | Iprodione | 36734-19-7 | 2.5E+03 | n | 3.3E+04 | n | | | | | 7.4E+02 | n | | 2.2E-01 | n | |
| | | | | 7.0E-01 | P | | | | | 1 | | | Iron | 7439-89-6 | 5.5E+04 | n | 8.2E+05 | nm | | | | | 1.4E+04 | n | | 3.5E+02 | n | |
| | | | | 3.0E-01 | I | | | V | | 1 | | 1.0E+04 | Isobutyl Alcohol | 78-83-1 | 2.3E+04 | ns | 3.5E+05 | nms | | | | | 5.9E+03 | n | | 1.2E+00 | n | |
| 9.5E-04 | I | | | 2.0E-01 | I | 2.0E+00 | C | | | 1 | 0.1 | | Isophorone | 78-59-1 | 5.7E+02 | c* | 2.4E+03 | c* | 2.1E+03 | n | 8.8E+03 | n | 7.8E+01 | c* | | 2.6E-02 | c* | |
| | | | | 1.5E-02 | I | | | V | | 1 | | | Isopropalin | 33820-53-0 | 1.2E+03 | n | 1.8E+04 | n | | | | | 4.0E+01 | n | | 9.2E-01 | n | |
| | | | | 2.0E+00 | P | 2.0E-01 | P | V | | 1 | | 1.1E+05 | Isopropanol | 67-63-0 | 5.6E+03 | n | 2.4E+04 | n | 2.1E+02 | n | 8.8E+02 | n | 4.1E+02 | n | | 8.4E-02 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Isopropyl Methyl Phosphonic Acid | 1832-54-8 | 6.3E+03 | n | 8.2E+04 | n | | | | | 2.0E+03 | n | | 4.3E-01 | n | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.1 | | Isoxaben | 82558-50-7 | 3.2E+03 | n | 4.1E+04 | n | | | | | 7.3E+02 | n | | 2.0E+00 | n | |
| | | | | | | 3.0E-01 | A | V | | 1 | | | JP-7 | E1737665 | 4.3E+08 | nm | 1.8E+09 | nm | 3.1E+02 | n | 1.3E+03 | n | 6.3E+02 | n | | | | |
| | | | | 8.0E-03 | O | | | | | 1 | 0.1 | | Lactofen | 77501-63-4 | 5.1E+02 | n | 6.6E+03 | n | | | | | 1.0E+02 | n | | 4.6E+00 | n | |
| | | | | 2.0E-04 | X | | | | | 1 | 0.1 | | Lactonitrile | 78-97-7 | 1.3E+01 | n | 1.6E+02 | n | | | | | 4.0E+00 | n | | 8.1E-04 | n | |
| | | | | 5.0E-05 | P | | | | | 1 | | | Lanthanum | 7439-91-0 | 3.9E+00 | n | 5.8E+01 | n | | | | | 1.0E+00 | n | | | | |
| | | | | 2.1E-05 | P | | | | | 1 | 0.1 | | Lanthanum Acetate Hydrate | 100587-90-4 | 1.3E+00 | n | 1.7E+01 | n | | | | | 4.2E-01 | n | | | | |
| | | | | 1.9E-05 | P | | | | | 1 | | | Lanthanum Chloride Heptahydrate | 10025-84-0 | 1.5E+00 | n | 2.2E+01 | n | | | | | 3.7E-01 | n | | | | |
| | | | | 2.8E-05 | P | | | | | 1 | | | Lanthanum Chloride, Anhydrous | 10099-58-8 | 2.2E+00 | n | 3.3E+01 | n | | | | | 5.7E-01 | n | | | | |
| | | | | 1.6E-05 | P | | | | | 1 | | | Lanthanum Nitrate Hexahydrate | 10277-43-7 | 1.3E+00 | n | 1.9E+01 | n | | | | | 3.2E-01 | n | | | | |
| | | | | | | | | | | | | | Lead Compounds | | | | | | | | | | | | | | | | |
| 8.5E-03 | C | 1.2E-05 | C | | | | | | | 1 | | | ~Lead Phosphate | 7446-27-7 | 8.2E+01 | c | 3.8E+02 | c | 2.3E-01 | c | 1.0E+00 | c | 9.1E+00 | c | | | | |
| 2.1E-01 | C | 8.0E-05 | C | | | | | | | 1 | 0.1 | | ~Lead acetate | 301-04-2 | 2.6E+00 | c | 1.1E+01 | c | 3.5E-02 | c | 1.5E-01 | c | 3.7E-01 | c | | 7.5E-05 | c | |
| | | | | | | | | | | 1 | | | ~Lead and Compounds | 7439-92-1 | 4.0E+02 | G | 8.0E+02 | G | 1.5E-01 | G | | | 1.5E+01 | G | 1.5E+01 | | | 1.4E+01 |
| 3.8E-02 | C | 1.1E-05 | C | | | | | | | 1 | 0.1 | | ~Lead subacetate | 1335-32-6 | 1.4E+01 | c | 6.0E+01 | c | 2.6E-01 | c | 1.1E+00 | c | 2.1E+00 | c | | 4.5E-04 | c | |
| | | | | 1.0E-07 | I | | | V | | 1 | | 2.4E+00 | ~Tetraethyl Lead | 78-00-2 | 7.8E-03 | n | 1.2E-01 | n | | | | | 1.3E-03 | n | | 4.7E-06 | n | |
| | | | | 5.0E-06 | P | | | V | | 1 | | 3.8E+02 | Lewisite | 541-25-3 | 3.9E-01 | n | 5.8E+00 | n | | | | | 9.0E-02 | n | | 3.8E-05 | n | |
| | | | | 7.7E-03 | O | | | | | 1 | 0.1 | | Linuron | 330-55-2 | 4.9E+02 | n | 6.3E+03 | n | | | | | 1.3E+02 | n | | 1.1E-01 | n | |
| | | | | 2.0E-03 | P | | | | | 1 | | | Lithium | 7439-93-2 | 1.6E+02 | n | 2.3E+03 | n | | | | | 4.0E+01 | n | | 1.2E+01 | n | |
| | | | | 5.0E-04 | I | | | | | 1 | 0.1 | | MCPA | 94-74-6 | 3.2E+01 | n | 4.1E+02 | n | | | | | 7.5E+00 | n | | 2.0E-03 | n | |
| | | | | 4.4E-03 | O | | | | | 1 | 0.1 | | MCPB | 94-81-5 | 2.8E+02 | n | 3.6E+03 | n | | | | | 6.5E+01 | n | | 2.6E-02 | n | |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | MCPP | 93-65-2 | 6.3E+01 | n | 8.2E+02 | n | | | | | 1.6E+01 | n | | 4.7E-03 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Malathion | 121-75-5 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.9E+02 | n | | 1.0E-01 | n | |
| | | | | 1.0E-01 | I | 7.0E-04 | C | | | 1 | 0.1 | | Maleic Anhydride | 108-31-6 | 6.3E+03 | n | 8.0E+04 | n | 7.3E-01 | n | 3.1E+00 | n | 1.9E+03 | n | | 3.8E-01 | n | |
| | | | | 5.0E-01 | I | | | | | 1 | 0.1 | | Maleic Hydrazide | 123-33-1 | 3.2E+04 | n | 4.1E+05 | nm | | | | | 1.0E+04 | n | | 2.1E+00 | n | |
| | | | | 1.0E-04 | P | | | | | 1 | 0.1 | | Malononitrile | 109-77-3 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 4.1E-04 | n | |
| | | | | 3.0E-02 | H | | | | | 1 | 0.1 | | Mancozeb | 8018-01-7 | 1.9E+03 | n | 2.5E+04 | n | | | | | 5.4E+02 | n | | 7.6E-01 | n | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Maneb | 12427-38-2 | 3.2E+02 | n | 4.1E+03 | n | | | | | 9.8E+01 | n | | 1.4E-01 | n | |
| | | | | 1.4E-01 | I | 5.0E-05 | I | | | 1 | | | Manganese (Diet) | 7439-96-5 | | | | | | | | | | | | | | |
| | | | | 2.4E-02 | G | 5.0E-05 | I | | | 0.04 | | | Manganese (Non-diet) | 7439-96-5 | 1.8E+03 | n | 2.6E+04 | n | 5.2E-02 | n | 2.2E-01 | n | 4.3E+02 | n | | 2.8E+01 | n | |
| | | | | 9.0E-05 | H | | | | | 1 | 0.1 | | Mephosfolan | 950-10-7 | 5.7E+00 | n | 7.4E+01 | n | | | | | 1.8E+00 | n | | 2.6E-03 | n | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Mepiquat Chloride | 24307-26-4 | 1.9E+03 | n | 2.5E+04 | n | | | | | 6.0E+02 | n | | 2.0E-01 | n | |
| 1.1E-02 | P | | | 4.0E-03 | P | | | | | 1 | 0.1 | | Mercaptobenzothiazole, 2- | 149-30-4 | 4.9E+01 | c** | 2.1E+02 | c* | | | | | 6.3E+00 | c* | | 1.8E-02 | c* | |
| | | | | | | | | | | | | | Mercury Compounds | | | | | | | | | | | | | | | | |
| | | | | 3.0E-04 | I | 3.0E-04 | G | | | 0.07 | | | ~Mercuric Chloride (and other Mercury salts) | 7487-94-7 | 2.3E+01 | n | 3.5E+02 | n | 3.1E-01 | n | 1.3E+00 | n | 5.7E+00 | n | 2.0E+00 | | | |
| | | | | | | 3.0E-04 | I | V | | 1 | | 3.1E+00 | ~Mercury (elemental) | 7439-97-6 | 1.1E+01 | ns | 4.6E+01 | ns | 3.1E-01 | n | 1.3E+00 | n | 6.3E-01 | n | 2.0E+00 | 3.3E-02 | n | 1.0E-01 |
| | | | | 1.0E-04 | I | | | | | 1 | | | ~Methyl Mercury | 22967-92-6 | 7.8E+00 | n | 1.2E+02 | n | | | | | 2.0E+00 | n | | 1.4E+01 | n | |
| | | | | 8.0E-05 | I | | | | | 1 | 0.1 | | ~Phenylmercuric Acetate | 62-38-4 | 5.1E+00 | n | 6.6E+01 | n | | | | | 1.6E+00 | n | | 5.0E-04 | n | |
| | | | | 3.0E-05 | I | | | V | | 1 | | | Merphos | 150-50-5 | 2.3E+00 | n | 3.5E+01 | n | | | | | 6.0E-01 | n | | 5.9E-02 | n | |
| | | | | 6.0E-02 | I | | | | | 1 | 0.1 | | Metalaxyl | 57837-19-1 | 3.8E+03 | n | 4.9E+04 | n | | | | | 1.2E+03 | n | | 3.3E-01 | n | |
| | | | | 1.0E-04 | I | 3.0E-02 | P | V | | 1 | | 4.6E+03 | Methacrylonitrile | 126-98-7 | 7.5E+00 | n | 1.0E+02 | n | 3.1E+01 | n | 1.3E+02 | n | 1.9E+00 | n | | 4.3E-04 | n | |
| | | | | 5.0E-05 | I | | | | | 1 | 0.1 | | Methamidophos | 10265-92-6 | 3.2E+00 | n | 4.1E+01 | n | | | | | 1.0E+00 | n | | 2.1E-04 | n | |
| | | | | 2.0E+00 | I | 2.0E+01 | I | V | | 1 | | 1.1E+05 | Methanol | 67-56-1 | 1.2E+05 | nms | 1.2E+06 | nms | 2.1E+04 | n | 8.8E+04 | n | 2.0E+04 | n | | 4.1E+00 | n | |
| | | | | 1.5E-03 | O | | | | | 1 | 0.1 | | Methidathion | 950-37-8 | 9.5E+01 | n | 1.2E+03 | n | | | | | 2.9E+01 | n | | 7.1E-03 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Methomyl | 16752-77-5 | 1.6E+03 | n | 2.1E+04 | n | | | | | 5.0E+02 | n | | 1.1E-01 | n | |
| 4.9E-02 | C | | | | | | | | | 1 | 0.1 | | Methoxy-5-nitroaniline, 2- | 99-59-2 | 1.1E+01 | c | 4.7E+01 | c | | | | | 1.5E+00 | c | | 5.3E-04 | c | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Methoxychlor | 72-43-5 | 3.2E+02 | n | 4.1E+03 | n | | | | | 3.7E+01 | n | 4.0E+01 | 2.0E+00 | n | 2.2E+00 |
| | | | | 8.0E-03 | P | 1.0E-03 | P | V | | 1 | | 1.2E+05 | Methoxyethanol Acetate, 2- | 110-49-6 | 1.1E+02 | n | 5.1E+02 | n | 1.0E+00 | n | 4.4E+00 | n | 2.1E+00 | n | | 4.2E-04 | n | |
| | | | | 5.0E-03 | P | 2.0E-02 | I | V | | 1 | | 1.1E+05 | Methoxyethanol, 2- | 109-86-4 | 3.3E+02 | n | 3.5E+03 | n | 2.1E+01 | n | 8.8E+01 | n | 2.9E+01 | n | | 5.9E-03 | n | |
| | | | | 1.0E+00 | X | | | V | | 1 | | 2.9E+04 | Methyl Acetate | 79-20-9 | 7.8E+04 | ns | 1.2E+06 | nms | | | | | 2.0E+04 | n | | 4.1E+00 | n | |
| | | | | | | 2.0E-02 | P | V | | 1 | | 6.8E+03 | Methyl Acrylate | 96-33-3 | 1.5E+02 | n | 6.1E+02 | n | 2.1E+01 | n | 8.8E+01 | n | 4.2E+01 | n | | 8.9E-03 | n | |
| | | | | 6.0E-01 | I | 5.0E+00 | I | V | | 1 | | 2.8E+04 | Methyl Ethyl Ketone (2-Butanone) | 78-93-3 | 2.7E+04 | n | 1.9E+05 | nms | 5.2E+03 | n | 2.2E+04 | n | 5.6E+03 | n | | 1.2E+00 | n | |
| | | 1.0E-03 | X | 1.0E-03 | P | 2.0E-05 | X | V | | 1 | | 1.8E+05 | Methyl Hydrazine | 60-34-4 | 1.4E-01 | c** | 6.2E-01 | c** | 2.8E-03 | c** | 1.2E-02 | c** | 5.6E-03 | c** | | 1.3E-06 | c** | |
| | | | | | | 3.0E+00 | I | V | | 1 | | 3.4E+03 | Methyl Isobutyl Ketone (4-methyl-2-pentanone) | 108-10-1 | 3.3E+04 | ns | 1.4E+05 | nms | 3.1E+03 | n | 1.3E+04 | n | 6.3E+03 | n | | 1.4E+00 | n | |
| | | | | | | 1.0E-03 | C | V | | 1 | | 1.0E+04 | Methyl Isocyanate | 624-83-9 | 4.6E+00 | n | 1.9E+01 | n | 1.0E+00 | n | 4.4E+00 | n | 2.1E+00 | n | | 5.9E-04 | n | |
| | | | | 1.4E+00 | I | 7.0E-01 | I | V | | 1 | | 2.4E+03 | Methyl Methacrylate | 80-62-6 | 4.4E+03 | ns | 1.9E+04 | ns | 7.3E+02 | n | 3.1E+03 | n | 1.4E+03 | n | | 3.0E-01 | n | |
| | | | | 2.5E-04 | I | | | | | 1 | 0.1 | | Methyl Parathion | 298-00-0 | 1.6E+01 | n | 2.1E+02 | n | | | | | 4.5E+00 | n | | 7.4E-03 | n | |
| | | | | 6.0E-02 | X | | | | | 1 | 0.1 | | Methyl Phosphonic Acid | 993-13-5 | 3.8E+03 | n | 4.9E+04 | n | | | | | 1.2E+03 | n | | 2.4E-01 | n | |
| | | | | 6.0E-03 | H | 4.0E-02 | H | V | | 1 | | 3.9E+02 | Methyl Styrene (Mixed Isomers) | 25013-15-4 | 3.2E+02 | n | 2.6E+03 | ns | 4.2E+01 | n | 1.8E+02 | n | 2.3E+01 | n | | 3.8E-02 | n | |

TR=1E-06
THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| 9.9E-02 | C | 2.8E-05 | C | | | | | | | 1 | 0.1 | | Methyl methanesulfonate | 66-27-3 | 5.5E+00 | c | 2.3E+01 | c | 1.0E-01 | c | 4.4E-01 | c | 7.9E-01 | c | | 1.6E-04 | c | |
| 1.8E-03 | C | 2.6E-07 | C | | | 3.0E+00 | I | V | | 1 | | 8.9E+03 | Methyl tert-Butyl Ether (MTBE) | 1634-04-4 | 4.7E+01 | c | 2.1E+02 | c | 1.1E+01 | c | 4.7E+01 | c | 1.4E+01 | c | | 3.2E-03 | c | |
| | | | | 3.0E-04 | X | | | | | 1 | 0.1 | | Methyl-1,4-benzenediamine dihydrochloride, 2- | 615-45-2 | 1.9E+01 | n | 2.5E+02 | n | | | | | 6.0E+00 | n | | 3.6E-03 | n | |
| | | | | | | 3.0E+00 | X | V | | 1 | | 2.5E+03 | Methyl-2-Pentanol, 4- | 108-11-2 | 5.4E+04 | ns | 2.3E+05 | nms | 3.1E+03 | n | 1.3E+04 | n | 6.3E+03 | n | | 1.4E+00 | n | |
| 9.0E-03 | P | | | 2.0E-02 | X | | | | | 1 | 0.1 | | Methyl-5-Nitroaniline, 2- | 99-55-8 | 6.0E+01 | c* | 2.6E+02 | c* | | | | | 8.2E+00 | c* | | 4.6E-03 | c* | |
| 8.3E+00 | C | 2.4E-03 | C | | | | | | | 1 | 0.1 | | Methyl-N-nitro-N-nitrosoguanidine, N- | 70-25-7 | 6.5E-02 | c | 2.8E-01 | c | 1.2E-03 | c | 5.1E-03 | c | 9.4E-03 | c | | 3.2E-06 | c | |
| 1.3E-01 | C | 3.7E-05 | C | | | | | | | 1 | 0.1 | | Methylaniline Hydrochloride, 2- | 636-21-5 | 4.2E+00 | c | 1.8E+01 | c | 7.6E-02 | c | 3.3E-01 | c | 6.0E-01 | c | | 2.6E-04 | c | |
| | | | | 1.0E-02 | A | | | | | 1 | 0.1 | | Methylarsonic acid | 124-58-3 | 6.3E+02 | n | 8.2E+03 | n | | | | | 2.0E+02 | n | | 5.8E-02 | n | |
| | | | | 2.0E-04 | X | | | | | 1 | 0.1 | | Methylbenzene,1-4-diamine monohydrochloride, 2- | 74612-12-7 | 1.3E+01 | n | 1.6E+02 | n | | | | | 4.0E+00 | n | | | | |
| 1.0E-01 | X | | | 3.0E-04 | X | | | | | 1 | 0.1 | | Methylbenzene-1,4-diamine sulfate, 2- | 615-50-9 | 5.4E+00 | c** | 2.3E+01 | c* | | | | | 7.8E-01 | c** | | | | |
| 2.2E+01 | C | 6.3E-03 | C | | | | | | M | 1 | 0.1 | | Methylcholanthrene, 3- | 56-49-5 | 5.5E-03 | c | 1.0E-01 | c | 1.6E-04 | c | 1.9E-03 | c | 1.1E-03 | c | | 2.2E-03 | c | |
| 2.0E-03 | I | 1.0E-08 | I | 6.0E-03 | I | 6.0E-01 | I | V | M | 1 | | 3.3E+03 | Methylene Chloride | 75-09-2 | 5.7E+01 | c** | 1.0E+03 | c** | 1.0E+02 | c** | 1.2E+03 | c** | 1.1E+01 | c** | 5.0E+00 | 2.9E-03 | c** | 1.3E-03 |
| 1.0E-01 | P | 4.3E-04 | C | 2.0E-03 | P | | | | M | 1 | 0.1 | | Methylene-bis(2-chloroaniline), 4,4'- | 101-14-4 | 1.2E+00 | c | 2.3E+01 | c* | 2.4E-03 | c | 2.9E-02 | c | 1.6E-01 | c | | 1.8E-03 | c | |
| 4.6E-02 | I | 1.3E-05 | C | | | | | | | 1 | 0.1 | | Methylene-bis(N,N-dimethyl) Aniline, 4,4'- | 101-61-1 | 1.2E+01 | c | 5.0E+01 | c | 2.2E-01 | c | 9.4E-01 | c | 7.0E-01 | c | | 3.9E-03 | c | |
| 1.6E+00 | C | 4.6E-04 | C | | | 2.0E-02 | C | | | 1 | 0.1 | | Methylenebisbenzenamine, 4,4'- | 101-77-9 | 3.4E-01 | c | 1.4E+00 | c | 6.1E-03 | c | 2.7E-02 | c | 4.7E-02 | c | | 2.1E-04 | c | |
| | | | | | | 6.0E-04 | I | | | 1 | 0.1 | | Methylenediphenyl Diisocyanate | 101-68-8 | 8.5E+05 | nm | 3.6E+06 | nm | 6.3E-01 | n | 2.6E+00 | n | | | | | | |
| | | | | 7.0E-02 | H | | | V | | 1 | | 5.0E+02 | Methylstyrene, Alpha- | 98-83-9 | 5.5E+03 | ns | 8.2E+04 | ns | | | | | 7.8E+02 | n | | 1.2E+00 | n | |
| | | | | 1.5E-01 | I | | | | | 1 | 0.1 | | Metolachlor | 51218-45-2 | 9.5E+03 | n | 1.2E+05 | nm | | | | | 2.7E+03 | n | | 3.2E+00 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Metribuzin | 21087-64-9 | 1.6E+03 | n | 2.1E+04 | n | | | | | 4.9E+02 | n | | 1.5E-01 | n | |
| | | | | 2.5E-01 | I | | | | | 1 | 0.1 | | Metsulfuron-methyl | 74223-64-6 | 1.6E+04 | n | 2.1E+05 | nm | | | | | 4.9E+03 | n | | 1.9E+00 | n | |
| | | 4.5E-06 | X | 1.0E-02 | X | 1.0E-01 | P | V | | 1 | | 6.9E+00 | Midrange Aliphatic Hydrocarbon Streams | E1790669 | 6.5E-01 | c | 2.8E+00 | c | 6.2E-01 | c | 2.7E+00 | c | 1.2E+00 | c* | | 1.8E-02 | c* | |
| | | | | 3.0E+00 | P | | | V | | 1 | | 3.4E-01 | Mineral oils | 8012-95-1 | 2.3E+05 | nms | 3.5E+06 | nms | | | | | 6.0E+04 | n | | 2.4E+03 | n | |
| 1.8E+01 | C | 5.1E-03 | C | 2.0E-04 | I | | | V | | 1 | | | Mirex | 2385-85-5 | 3.6E-02 | c | 1.7E-01 | c | 5.5E-04 | c | 2.4E-03 | c | 8.8E-04 | c | | 6.3E-04 | c | |
| | | | | 2.0E-03 | I | | | | | 1 | 0.1 | | Molinate | 2212-67-1 | 1.3E+02 | n | 1.6E+03 | n | | | | | 3.0E+01 | n | | 1.7E-02 | n | |
| | | | | 5.0E-03 | I | 2.0E-03 | A | | | 1 | | | Molybdenum | 7439-98-7 | 3.9E+02 | n | 5.8E+03 | n | 2.1E+00 | n | 8.8E+00 | n | 1.0E+02 | n | | 2.0E+00 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | | | Monochloramine | 10599-90-3 | 7.8E+03 | n | 1.2E+05 | nm | | | | | 2.0E+03 | n | 4.0E+03(G) | | | |
| | | | | 2.0E-03 | P | | | | | 1 | 0.1 | | Monomethylaniline | 100-61-8 | 1.3E+02 | n | 1.6E+03 | n | | | | | 3.8E+01 | n | | 1.4E-02 | n | |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Myclobutanil | 88671-89-0 | 1.6E+03 | n | 2.1E+04 | n | | | | | 4.5E+02 | n | | 5.6E+00 | n | |
| | | | | 3.0E-04 | X | | | | | 1 | 0.1 | | N,N'-Diphenyl-1,4-benzenediamine | 74-31-7 | 1.9E+01 | n | 2.5E+02 | n | | | | | 3.6E+00 | n | | 3.7E-01 | n | |
| | | | | 2.0E-03 | I | | | V | | 1 | | | Naled | 300-76-5 | 1.6E+02 | n | 2.3E+03 | n | | | | | 4.0E+01 | n | | 1.8E-02 | n | |
| | | | | 3.0E-02 | X | 1.0E-01 | P | V | | 1 | | | Naphtha, High Flash Aromatic (HFAN) | 64742-95-6 | 2.3E+03 | n | 3.5E+04 | n | 1.0E+02 | n | 4.4E+02 | n | 1.5E+02 | n | | | | |
| 1.8E+00 | C | 0.0E+00 | C | | | | | | | 1 | 0.1 | | Naphthylamine, 2- | 91-59-8 | 3.0E-01 | c | 1.3E+00 | c | | | | | 3.9E-02 | c | | 2.0E-04 | c | |
| | | | | 1.2E-01 | O | | | | | 1 | 0.1 | | Napropamide | 15299-99-7 | 7.6E+03 | n | 9.8E+04 | n | | | | | 2.0E+03 | n | | 1.3E+01 | n | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 1.4E-05 | C | | | 1 | 0.1 | | Nickel Acetate | 373-02-4 | 6.0E-01 | c | 2.5E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 8.6E-02 | c | | 1.7E-05 | c | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 1.4E-05 | C | | | 1 | 0.1 | | Nickel Carbonate | 3333-67-3 | 6.0E-01 | c | 2.5E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 8.6E-02 | c | | | | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 1.4E-05 | C | V | | 1 | | | Nickel Carbonyl | 13463-39-3 | 7.6E-01 | c | 3.6E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 1.7E-02 | c** | | | | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 1.4E-05 | C | | | 0.04 | | | Nickel Hydroxide | 12054-48-7 | 7.6E-01 | c | 3.6E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 7.6E-02 | c | | | | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 2.0E-05 | C | | | 0.04 | | | Nickel Oxide | 1313-99-1 | 7.6E-01 | c | 3.6E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 7.6E-02 | c | | | | |
| 9.1E-01 | C | 2.4E-04 | I | 1.1E-02 | C | 1.4E-05 | C | | | 0.04 | | | Nickel Refinery Dust | E715532 | 7.6E-01 | c | 3.6E+00 | c | 1.2E-02 | c** | 5.1E-02 | c** | 8.3E-02 | c | | 1.3E-02 | c | |
| | | 2.6E-04 | C | 2.0E-02 | I | 9.0E-05 | A | | | 0.04 | | | Nickel Soluble Salts | 7440-02-0 | 1.5E+03 | n | 2.2E+04 | n | 1.1E-02 | c** | 4.7E-02 | c** | 3.9E+02 | n | | 2.6E+01 | n | |
| 1.7E+00 | C | 4.8E-04 | I | 1.1E-02 | C | 1.4E-05 | C | | | 0.04 | | | Nickel Subsulfide | 12035-72-2 | 4.1E-01 | c | 1.9E+00 | c | 5.8E-03 | c** | 2.6E-02 | c** | 4.5E-02 | c | | | | |
| 9.1E-01 | C | 2.6E-04 | C | 1.1E-02 | C | 1.4E-05 | C | | | 1 | 0.1 | | Nickelocene | 1271-28-9 | 6.0E-01 | c | 2.5E+00 | c | 1.1E-02 | c** | 4.7E-02 | c** | 8.6E-02 | c | | | | |
| | | | | 1.6E+00 | I | | | | | 1 | | | Nitrate (measured as nitrogen) | 14797-55-8 | 1.3E+05 | nm | 1.9E+06 | nm | | | | | 3.2E+04 | n | 1.0E+04 | | | |
| | | | | | | | | | | 1 | | | Nitrate + Nitrite (measured as nitrogen) | E701177 | | | | | | | | | | | 1.0E+04 | | | |
| | | | | 1.0E-01 | I | | | | | 1 | | | Nitrite (measured as nitrogen) | 14797-65-0 | 7.8E+03 | n | 1.2E+05 | nm | | | | | 2.0E+03 | n | 1.0E+03 | | | |
| | | | | 1.0E-02 | X | 5.0E-05 | X | | | 1 | 0.1 | | Nitroaniline, 2- | 88-74-4 | 6.3E+02 | n | 8.0E+03 | n | 5.2E-02 | n | 2.2E-01 | n | 1.9E+02 | n | | 8.0E-02 | n | |
| 2.0E-02 | P | | | 4.0E-03 | P | 6.0E-03 | P | | | 1 | 0.1 | | Nitroaniline, 4- | 100-01-6 | 2.7E+01 | c** | 1.1E+02 | c* | 6.3E+00 | n | 2.6E+01 | n | 3.8E+00 | c* | | 1.6E-03 | c* | |
| | | 4.0E-05 | I | 2.0E-03 | I | 9.0E-03 | I | V | | 1 | | 3.1E+03 | Nitrobenzene | 98-95-3 | 5.1E+00 | c* | 2.2E+01 | c* | 7.0E-02 | c | 3.1E-01 | c | 1.4E-01 | c* | | 9.2E-05 | c* | |
| | | | | 3.0E+03 | P | | | | | 1 | 0.1 | | Nitrocellulose | 9004-70-0 | 1.9E+08 | nm | 2.5E+09 | nm | | | | | 6.0E+07 | n | | 1.3E+04 | n | |
| | | | | 7.0E-02 | H | | | | | 1 | 0.1 | | Nitrofurantoin | 67-20-9 | 4.4E+03 | n | 5.7E+04 | n | | | | | 1.4E+03 | n | | 6.1E-01 | n | |
| 1.3E+00 | C | 3.7E-04 | C | | | | | | | 1 | 0.1 | | Nitrofurazone | 59-87-0 | 4.2E-01 | c | 1.8E+00 | c | 7.6E-03 | c | 3.3E-02 | c | 6.0E-02 | c | | 5.4E-05 | c | |
| 1.7E-02 | P | | | 1.0E-04 | P | | | | | 1 | 0.1 | | Nitroglycerin | 55-63-0 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 8.5E-04 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Nitroguanidine | 556-88-7 | 6.3E+03 | n | 8.2E+04 | n | | | | | 2.0E+03 | n | | 4.8E-01 | n | |
| | | 8.8E-06 | P | | | 5.0E-03 | P | V | | 1 | | 1.8E+04 | Nitromethane | 75-52-5 | 5.4E+00 | c* | 2.4E+01 | c* | 3.2E-01 | c* | 1.4E+00 | c* | 6.4E-01 | c* | | 1.4E-04 | c* | |
| | | 5.8E-04 | X | | | 2.0E-02 | I | V | | 1 | | 4.9E+03 | Nitropropane, 2- | 79-46-9 | 6.4E-02 | c | 2.8E-01 | c | 4.8E-03 | c | 2.1E-02 | c | 9.7E-03 | c | | 2.5E-06 | c | |
| 2.7E+01 | C | 7.7E-03 | C | | | | | | M | 1 | 0.1 | | Nitroso-N-ethylurea, N- | 759-73-9 | 4.5E-03 | c | 8.5E-02 | c | 1.3E-04 | c | 1.6E-03 | c | 9.2E-04 | c | | 2.2E-07 | c | |
| 1.2E+02 | C | 3.4E-02 | C | | | | | | M | 1 | 0.1 | | Nitroso-N-methylurea, N- | 684-93-5 | 1.0E-03 | c | 1.9E-02 | c | 3.0E-05 | c | 3.6E-04 | c | 2.1E-04 | c | | 4.6E-08 | c | |
| 5.4E+00 | I | 1.6E-03 | I | | | | | V | | 1 | | | Nitroso-di-N-butylamine, N- | 924-16-3 | 9.9E-02 | c | 4.6E-01 | c | 1.8E-03 | c | 7.7E-03 | c | 2.7E-03 | c | | 5.5E-06 | c | |
| 7.0E+00 | I | 2.0E-03 | C | | | | | | | 1 | 0.1 | | Nitroso-di-N-propylamine, N- | 621-64-7 | 7.8E-02 | c | 3.3E-01 | c | 1.4E-03 | c | 6.1E-03 | c | 1.1E-02 | c | | 8.1E-06 | c | |
| 2.8E+00 | I | 8.0E-04 | C | | | | | | | 1 | 0.1 | | Nitrosodiethanolamine, N- | 1116-54-7 | 1.9E-01 | c | 8.2E-01 | c | 3.5E-03 | c | 1.5E-02 | c | 2.8E-02 | c | | 5.6E-06 | c | |
| 1.5E+02 | I | 4.3E-02 | I | | | | | | M | 1 | 0.1 | | Nitrosodiethylamine, N- | 55-18-5 | 8.1E-04 | c | 1.5E-02 | c | 2.4E-05 | c | 2.9E-04 | c | 1.7E-04 | c | | 6.1E-08 | c | |
| 5.1E+01 | I | 1.4E-02 | I | 8.0E-06 | P | 4.0E-05 | X | V | M | 1 | | 2.4E+05 | Nitrosodimethylamine, N- | 62-75-9 | 2.0E-03 | c | 3.4E-02 | c | 7.2E-05 | c | 8.8E-04 | c | 1.1E-04 | c | | 2.7E-08 | c | |
| 4.9E-03 | I | 2.6E-06 | C | | | | | | | 1 | 0.1 | | Nitrosodiphenylamine, N- | 86-30-6 | 1.1E+02 | c | 4.7E+02 | c | 1.1E+00 | c | 4.7E+00 | c | 1.2E+01 | c | | 6.7E-02 | c | |
| 2.2E+01 | I | 6.3E-03 | C | | | | | V | | 1 | | 1.1E+05 | Nitrosomethylethylamine, N- | 10595-95-6 | 2.0E-02 | c | 9.1E-02 | c | 4.5E-04 | c | 1.9E-03 | c | 7.1E-04 | c | | 2.0E-07 | c | |
| 6.7E+00 | C | 1.9E-03 | C | | | | | | | 1 | 0.1 | | Nitrosomorpholine [N-] | 59-89-2 | 8.1E-02 | c | 3.4E-01 | c | 1.5E-03 | c | 6.5E-03 | c | 1.2E-02 | c | | 2.8E-06 | c | |
| 9.4E+00 | C | 2.7E-03 | C | | | | | | | 1 | 0.1 | | Nitrosopiperidine [N-] | 100-75-4 | 5.8E-02 | c | 2.4E-01 | c | 1.0E-03 | c | 4.5E-03 | c | 8.2E-03 | c | | 4.4E-06 | c | |
| 2.1E+00 | I | 6.1E-04 | I | | | | | | | 1 | 0.1 | | Nitrosopyrrolidine, N- | 930-55-2 | 2.6E-01 | c | 1.1E+00 | c | 4.6E-03 | c | 2.0E-02 | c | 3.7E-02 | c | | 1.4E-05 | c | |
| | | | | 1.0E-04 | X | | | | | 1 | 0.1 | | Nitrotoluene, m- | 99-08-1 | 6.3E+00 | n | 8.2E+01 | n | | | | | 1.7E+00 | n | | 1.6E-03 | n | |
| 2.2E-01 | P | | | 9.0E-04 | P | | | V | | 1 | | 1.5E+03 | Nitrotoluene, o- | 88-72-2 | 3.2E+00 | c* | 1.5E+01 | c* | | | | | 3.1E-01 | c* | | 3.0E-04 | c* | |
| 1.6E-02 | P | | | 4.0E-03 | P | | | | | 1 | 0.1 | | Nitrotoluene, p- | 99-99-0 | 3.4E+01 | c** | 1.4E+02 | c* | | | | | 4.3E+00 | c* | | 4.0E-03 | c* | |
| | | | | 3.0E-04 | X | 2.0E-02 | P | V | | 1 | | 6.9E+00 | Nonane, n- | 111-84-2 | 1.1E+01 | ns | 7.2E+01 | ns | 2.1E+01 | n | 8.8E+01 | n | 5.3E+00 | n | | 7.5E-02 | n | |
| | | | | 1.5E-02 | O | | | | | 1 | 0.1 | | Norflurazon | 27314-13-2 | 9.5E+02 | n | 1.2E+04 | n | | | | | 2.9E+02 | n | | 1.9E+00 | n | |
| | | | | 3.0E-03 | I | | | | | 1 | 0.1 | | Octabromodiphenyl Ether | 32536-52-0 | 1.9E+02 | n | 2.5E+03 | n | | | | | 6.0E+01 | n | | 1.2E+01 | n | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.006 | | Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) | 2691-41-0 | 3.9E+03 | n | 5.7E+04 | n | | | | | 1.0E+03 | n | | 1.3E+00 | n | |
| | | | | 2.0E-03 | H | | | | | 1 | 0.1 | | Octamethylpyrophosphoramide | 152-16-9 | 1.3E+02 | n | 1.6E+03 | n | | | | | 4.0E+01 | n | | 9.6E-03 | n | |
| 7.8E-03 | O | | | 1.4E-01 | O | | | | | 1 | 0.1 | | Oryzalin | 19044-88-3 | 7.0E+01 | c | 2.9E+02 | c | | | | | 7.9E+00 | c | | 1.5E-02 | c | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Oxadiazon | 19666-30-9 | 3.2E+02 | n | 4.1E+03 | n | | | | | 4.7E+01 | n | | 4.8E-01 | n | |

TR=1E-6
THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 2.5E-02 | I | | | | | 1 | 0.1 | | Oxamyl | 23135-22-0 | 1.6E+03 | n | 2.1E+04 | n | | | | | 5.0E+02 | n | 2.0E+02 | 1.1E-01 | n | 4.4E-02 |
| 7.3E-02 | O | | | 3.0E-02 | O | | | | | 1 | 0.1 | | Oxyfluorfen | 42874-03-3 | 7.4E+00 | c | 3.1E+01 | c | | | | | 5.4E-01 | c | | 4.3E-02 | c | |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Paclobutrazol | 76738-62-0 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.3E+02 | n | | 4.6E-01 | n | |
| | | | | 4.5E-03 | I | | | | | 1 | 0.1 | | Paraquat Dichloride | 1910-42-5 | 2.8E+02 | n | 3.7E+03 | n | | | | | 9.0E+01 | n | | 1.2E+00 | n | |
| | | | | 6.0E-03 | H | | | | | 1 | 0.1 | | Parathion | 56-38-2 | 3.8E+02 | n | 4.9E+03 | n | | | | | 8.6E+01 | n | | 4.3E-01 | n | |
| | | | | 5.0E-02 | H | | | V | | 1 | | | Pebulate | 1114-71-2 | 3.9E+03 | n | 5.8E+04 | n | | | | | 5.6E+02 | n | | 4.5E-01 | n | |
| | | | | 3.0E-01 | O | | | | | 1 | 0.1 | | Pendimethalin | 40487-42-1 | 1.9E+04 | n | 2.5E+05 | nm | | | | | 1.4E+03 | n | | 1.6E+01 | n | |
| | | | | 2.0E-03 | I | | | V | | 1 | | 3.1E-01 | Pentabromodiphenyl Ether | 32534-81-9 | 1.6E+02 | ns | 2.3E+03 | ns | | | | | 4.0E+01 | n | | 1.7E+00 | n | |
| | | | | 1.0E-04 | I | | | | | 1 | 0.1 | | Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99) | 60348-60-9 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 8.7E-02 | n | |
| | | | | 8.0E-04 | I | | | V | | 1 | | | Pentachlorobenzene | 608-93-5 | 6.3E+01 | n | 9.3E+02 | n | | | | | 3.2E+00 | n | | 2.4E-02 | n | |
| 9.0E-02 | P | | | | | | | V | | 1 | | 4.6E+02 | Pentachloroethane | 76-01-7 | 7.7E+00 | c | 3.6E+01 | c | | | | | 6.5E-01 | c | | 3.1E-04 | c | |
| 2.6E-01 | H | | | 3.0E-03 | I | | | V | | 1 | | | Pentachloronitrobenzene | 82-68-8 | 2.7E+00 | c* | 1.3E+01 | c | | | | | 1.2E-01 | c | | 1.5E-03 | c | |
| 4.0E-01 | I | 5.1E-06 | C | 5.0E-03 | I | | | | | 1 | 0.25 | | Pentachlorophenol | 87-86-5 | 1.0E+00 | c | 4.0E+00 | c | 5.5E-01 | c | 2.4E+00 | c | 4.1E-02 | c | 1.0E+00 | 5.7E-05 | c | 1.4E-03 |
| 4.0E-03 | X | | | 2.0E-03 | P | | | | | 1 | 0.1 | | Pentaerythritol tetranitrate (PETN) | 78-11-5 | 1.3E+02 | n | 5.7E+02 | c** | | | | | 1.9E+01 | c** | | 2.8E-02 | c** | |
| | | | | 1.0E-04 | X | | | | | 1 | 0.1 | | Pentamethylphosphoramide (PMPA) | 10159-46-3 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 4.1E-04 | n | |
| | | | | | | 1.0E+00 | P | V | | 1 | | 3.9E+02 | Pentane, n- | 109-66-0 | 8.1E+02 | ns | 3.4E+03 | ns | 1.0E+03 | n | 4.4E+03 | n | 2.1E+03 | n | | 1.0E+01 | n | |
| | | | | | | | | | | | | | Perchlorates | | | | | | | | | | | | | | | | |
| | | | | 7.0E-04 | I | | | | | 1 | | | ~Ammonium Perchlorate | 7790-98-9 | 5.5E+01 | n | 8.2E+02 | n | | | | | 1.4E+01 | n | | | | |
| | | | | 7.0E-04 | I | | | | | 1 | | | ~Lithium Perchlorate | 7791-03-9 | 5.5E+01 | n | 8.2E+02 | n | | | | | 1.4E+01 | n | | | | |
| | | | | 7.0E-04 | I | | | | | 1 | | | ~Perchlorate and Perchlorate Salts | 14797-73-0 | 5.5E+01 | n | 8.2E+02 | n | | | | | 1.4E+01 | n | 1.5E+01(G) | | | |
| | | | | 7.0E-04 | I | | | | | 1 | | | ~Potassium Perchlorate | 7778-74-7 | 5.5E+01 | n | 8.2E+02 | n | | | | | 1.4E+01 | n | | | | |
| | | | | 7.0E-04 | I | | | | | 1 | | | ~Sodium Perchlorate | 7601-89-0 | 5.5E+01 | n | 8.2E+02 | n | | | | | 1.4E+01 | n | | | | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Perfluorobutane sulfonic acid (PFBS) | 375-73-5 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 1.3E-01 | n | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Perfluorobutanesulfonate | 45187-15-3 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 1.3E-01 | n | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.1 | | Permethrin | 52645-53-1 | 3.2E+03 | n | 4.1E+04 | n | | | | | 1.0E+03 | n | | 2.4E+02 | n | |
| 2.2E-03 | C | 6.3E-07 | C | | | | | | | 1 | 0.1 | | Phenacetin | 62-44-2 | 2.5E+02 | c | 1.0E+03 | c | 4.5E+00 | c | 1.9E+01 | c | 3.4E+01 | c | | 9.7E-03 | c | |
| | | | | 2.4E-01 | O | | | | | 1 | 0.1 | | Phenmedipham | 13684-63-4 | 1.5E+04 | n | 2.0E+05 | nm | | | | | 3.8E+03 | n | | 2.1E+01 | n | |
| | | | | 3.0E-01 | I | 2.0E-01 | C | | | 1 | 0.1 | | Phenol | 108-95-2 | 1.9E+04 | n | 2.5E+05 | nm | 2.1E+02 | n | 8.8E+02 | n | 5.8E+03 | n | | 3.3E+00 | n | |
| | | | | 4.0E-03 | I | | | | | 1 | 0.1 | | Phenol, 2-(1-methylethoxy)-, methylcarbamate | 114-26-1 | 2.5E+02 | n | 3.3E+03 | n | | | | | 7.8E+01 | n | | 2.5E-02 | n | |
| | | | | 5.0E-04 | X | | | | | 1 | 0.1 | | Phenothiazine | 92-84-2 | 3.2E+01 | n | 4.1E+02 | n | | | | | 4.3E+00 | n | | 1.4E-02 | n | |
| | | | | 2.0E-04 | X | | | V | | 1 | | 1.3E+02 | Phenyl Isothiocyanate | 103-72-0 | 1.6E+01 | n | 2.3E+02 | ns | | | | | 2.6E+00 | n | | 1.7E-03 | n | |
| | | | | 6.0E-03 | I | | | | | 1 | 0.1 | | Phenylenediamine, m- | 108-45-2 | 3.8E+02 | n | 4.9E+03 | n | | | | | 1.2E+02 | n | | 3.2E-02 | n | |
| 1.2E-01 | P | | | 4.0E-03 | P | | | | | 1 | 0.1 | | Phenylenediamine, o- | 95-54-5 | 4.5E+00 | c* | 1.9E+01 | c | | | | | 6.5E-01 | c | | 1.7E-04 | c | |
| | | | | 1.0E-03 | X | | | | | 1 | 0.1 | | Phenylenediamine, p- | 106-50-3 | 6.3E+01 | n | 8.2E+02 | n | | | | | 2.0E+01 | n | | 5.4E-03 | n | |
| 1.9E-03 | H | | | | | | | | | 1 | 0.1 | | Phenylphenol, 2- | 90-43-7 | 2.8E+02 | c | 1.2E+03 | c | | | | | 3.0E+01 | c | | 4.1E-01 | c | |
| | | | | 2.0E-04 | H | | | | | 1 | 0.1 | | Phorate | 298-02-2 | 1.3E+01 | n | 1.6E+02 | n | | | | | 3.0E+00 | n | | 3.4E-03 | n | |
| | | | | | | 3.0E-04 | I | V | | 1 | | 1.6E+03 | Phosgene | 75-44-5 | 3.1E-01 | n | 1.3E+00 | n | 3.1E-01 | n | 1.3E+00 | n | 6.3E-01 | n | | 1.6E-04 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Phosmet | 732-11-6 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.7E+02 | n | | 8.2E-02 | n | |
| | | | | | | | | | | | | | Phosphates, Inorganic | | | | | | | | | | | | | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Aluminum metaphosphate | 13776-88-0 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Ammonium polyphosphate | 68333-79-9 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Calcium pyrophosphate | 7790-76-3 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Diammonium phosphate | 7783-28-0 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Dicalcium phosphate | 7757-93-9 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Dimagnesium phosphate | 7782-75-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Dipotassium phosphate | 7758-11-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Disodium phosphate | 7558-79-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monoaluminum phosphate | 13530-50-2 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monoammonium phosphate | 7722-76-1 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monocalcium phosphate | 7758-23-8 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monomagnesium phosphate | 7757-86-0 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monopotassium phosphate | 7778-77-0 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Monosodium phosphate | 7558-80-7 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Polyphosphoric acid | 8017-16-1 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Potassium tripolyphosphate | 13845-36-8 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium acid pyrophosphate | 7758-16-9 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium aluminum phosphate (acidic) | 7785-88-8 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium aluminum phosphate (anhydrous) | 10279-59-1 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium aluminum phosphate (tetrahydrate) | 10305-76-7 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium hexametaphosphate | 10124-56-8 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium polyphosphate | 68915-31-1 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium trimetaphosphate | 7785-84-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Sodium tripolyphosphate | 7758-29-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Tetrapotassium phosphate | 7320-34-5 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Tetrasodium pyrophosphate | 7722-88-5 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate) | 15136-87-5 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Tricalcium phosphate | 7758-87-4 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Trimagnesium phosphate | 7757-87-1 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Tripotassium phosphate | 7778-53-2 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 4.9E+01 | P | | | | | 1 | | | ~Trisodium phosphate | 7601-54-9 | 3.8E+06 | nm | 5.7E+07 | nm | | | | | 9.7E+05 | n | | | | |
| | | | | 3.0E-04 | I | 3.0E-04 | I | V | | 1 | | | Phosphine | 7803-51-2 | 2.3E+01 | n | 3.5E+02 | n | 3.1E-01 | n | 1.3E+00 | n | 5.7E-01 | n | | | | |
| | | | | 4.9E+01 | P | 1.0E-02 | I | | | 1 | | | Phosphoric Acid | 7664-38-2 | 3.0E+06 | nm | 2.9E+07 | nm | 1.0E+01 | n | 4.4E+01 | n | 9.7E+05 | n | | | | |
| | | | | 2.0E-05 | I | | | V | | 1 | | | Phosphorus, White | 7723-14-0 | 1.6E+00 | n | 2.3E+01 | n | | | | | 4.0E-01 | n | | 1.5E-03 | n | |
| | | | | | | | | | | | | | Phthalates | | | | | | | | | | | | | | | | |
| 1.4E-02 | I | 2.4E-06 | C | 2.0E-02 | I | | | | | 1 | 0.1 | | ~Bis(2-ethylhexyl)phthalate | 117-81-7 | 3.9E+01 | c* | 1.6E+02 | c | 1.2E+00 | c | 5.1E+00 | c | 5.6E+00 | c* | 6.0E+00 | 1.3E+00 | c* | 1.4E+00 |
| 1.9E-03 | P | | | 2.0E-01 | I | | | | | 1 | 0.1 | | ~Butyl Benzyl Phthalate | 85-68-7 | 2.9E+02 | c* | 1.2E+03 | c | | | | | 1.6E+01 | c | | 2.4E-01 | c | |
| | | | | 1.0E+00 | I | | | | | 1 | 0.1 | | ~Butylphthalyl Butylglycolate | 85-70-1 | 6.3E+04 | n | 8.2E+05 | nm | | | | | 1.3E+04 | n | | 3.1E+02 | n | |

R=1E-06 THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | ~Dibutyl Phthalate | 84-74-2 | 6.3E+03 | n | 8.2E+04 | n | | | | | 9.0E+02 | n | | 2.3E+00 | n | |
| | | | | 8.0E-01 | I | | | | | 1 | 0.1 | | ~Diethyl Phthalate | 84-66-2 | 5.1E+04 | n | 6.6E+05 | nm | | | | | 1.5E+04 | n | | 6.1E+00 | n | |
| | | | | 1.0E-01 | I | | | V | | 1 | | | ~Dimethylterephthalate | 120-61-6 | 7.8E+03 | n | 1.2E+05 | nm | | | | | 1.9E+03 | n | | 4.9E-01 | n | |
| | | | | 1.0E-02 | P | | | | | 1 | 0.1 | | ~Octyl Phthalate, di-N- | 117-84-0 | 6.3E+02 | n | 8.2E+03 | n | | | | | 2.0E+02 | n | | 5.7E+01 | n | |
| | | | | 5.0E-01 | X | | | | | 1 | 0.1 | | ~Phthalic Acid, p- | 100-21-0 | 3.2E+04 | n | 4.1E+05 | nm | | | | | 9.4E+03 | n | | 3.4E+00 | n | |
| | | | | 2.0E+00 | I | 2.0E-02 | C | | | 1 | 0.1 | | ~Phthalic Anhydride | 85-44-9 | 1.3E+05 | nm | 1.6E+06 | nm | 2.1E+01 | n | 8.8E+01 | n | 3.9E+04 | n | | 8.5E+00 | n | |
| | | | | 7.0E-02 | I | | | | | 1 | 0.1 | | Picloram | 1918-02-1 | 4.4E+03 | n | 5.7E+04 | n | | | | | 1.4E+03 | n | 5.0E+02 | 3.8E-01 | n | 1.4E-01 |
| | | | | 1.0E-04 | X | | | | | 1 | 0.1 | | Picramic Acid (2-Amino-4,6-dinitrophenol) | 96-91-3 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 1.3E-03 | n | |
| | | | | 2.0E-03 | X | | | | | 1 | 0.1 | | Picric Acid (2,4,6-Trinitrophenol) | 88-89-1 | 1.3E+02 | n | 1.6E+03 | n | | | | | 4.0E+01 | n | | 1.9E-01 | n | |
| | | | | 7.0E-05 | O | | | | | 1 | 0.1 | | Pirimiphos, Methyl | 29232-93-7 | 4.4E+00 | n | 5.7E+01 | n | | | | | 8.5E-01 | n | | 8.1E-04 | n | |
| 3.0E+01 | C | 8.6E-03 | C | 7.0E-06 | H | | | | | 1 | 0.1 | | Polybrominated Biphenyls | 36355-01-8 | 1.8E-02 | c* | 7.7E-02 | c* | 3.3E-04 | c | 1.4E-03 | c | 2.6E-03 | c* | | | | |
| | | | | | | | | | | | | | Polychlorinated Biphenyls (PCBs) | | | | | | | | | | | | | | | |
| 7.0E-02 | G | 2.0E-05 | G | 7.0E-05 | I | | | V | | 1 | 0.14 | | ~Aroclor 1016 | 12674-11-2 | 4.1E+00 | n | 2.7E+01 | c** | 1.4E-01 | c | 6.1E-01 | c | 2.2E-01 | c** | | 2.1E-02 | c** | |
| 2.0E+00 | G | 5.7E-04 | G | | | | | V | | 1 | 0.14 | | ~Aroclor 1221 | 11104-28-2 | 2.0E-01 | c | 8.3E-01 | c | 4.9E-03 | c | 2.1E-02 | c | 4.7E-03 | c | | 8.0E-05 | c | |
| 2.0E+00 | G | 5.7E-04 | G | | | | | V | | 1 | 0.14 | | ~Aroclor 1232 | 11141-16-5 | 1.7E-01 | c | 7.2E-01 | c | 4.9E-03 | c | 2.1E-02 | c | 4.7E-03 | c | | 8.0E-05 | c | |
| 2.0E+00 | G | 5.7E-04 | G | | | | | V | | 1 | 0.14 | | ~Aroclor 1242 | 53469-21-9 | 2.3E-01 | c | 9.5E-01 | c | 4.9E-03 | c | 2.1E-02 | c | 7.8E-03 | c | | 1.2E-03 | c | |
| 2.0E+00 | G | 5.7E-04 | G | | | | | V | | 1 | 0.14 | | ~Aroclor 1248 | 12672-29-6 | 2.3E-01 | c | 9.4E-01 | c | 4.9E-03 | c | 2.1E-02 | c | 7.8E-03 | c | | 1.2E-03 | c | |
| 2.0E+00 | G | 5.7E-04 | G | 2.0E-05 | I | | | V | | 1 | 0.14 | | ~Aroclor 1254 | 11097-69-1 | 2.4E-01 | c** | 9.7E-01 | c* | 4.9E-03 | c | 2.1E-02 | c | 7.8E-03 | c* | | 2.0E-03 | c* | |
| 2.0E+00 | G | 5.7E-04 | G | | | | | V | | 1 | 0.14 | | ~Aroclor 1260 | 11096-82-5 | 2.4E-01 | c | 9.9E-01 | c | 4.9E-03 | c | 2.1E-02 | c | 7.8E-03 | c | | 5.5E-03 | c | |
| | | | | 6.0E-04 | X | | | V | | 1 | 0.14 | | ~Aroclor 5460 | 11126-42-4 | 3.5E+01 | n | 4.4E+02 | n | | | | | 1.2E+01 | n | | 2.0E+00 | n | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189) | 39635-31-9 | 1.3E-01 | c* | 5.2E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 2.8E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167) | 52663-72-6 | 1.2E-01 | c* | 5.1E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.7E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157) | 69782-90-7 | 1.2E-01 | c* | 5.0E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.7E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156) | 38380-08-4 | 1.2E-01 | c* | 5.0E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.7E-03 | c | |
| 3.9E+03 | W | 1.1E+00 | W | 2.3E-08 | W | 1.3E-06 | W | V | | 1 | 0.14 | | ~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169) | 32774-16-6 | 1.2E-04 | c* | 5.1E-04 | c* | 2.5E-06 | c | 1.1E-05 | c | 4.0E-06 | c | | 1.7E-06 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123) | 65510-44-3 | 1.2E-01 | c* | 4.9E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.0E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118) | 31508-00-6 | 1.2E-01 | c* | 4.9E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.0E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105) | 32598-14-4 | 1.2E-01 | c* | 4.9E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.0E-03 | c | |
| 3.9E+00 | W | 1.1E-03 | W | 2.3E-05 | W | 1.3E-03 | W | V | | 1 | 0.14 | | ~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114) | 74472-37-0 | 1.2E-01 | c* | 5.0E-01 | c* | 2.5E-03 | c | 1.1E-02 | c | 4.0E-03 | c | | 1.0E-03 | c | |
| 1.3E+04 | W | 3.8E+00 | W | 7.0E-09 | W | 4.0E-07 | W | V | | 1 | 0.14 | | ~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126) | 57465-28-8 | 3.6E-05 | c* | 1.5E-04 | c* | 7.4E-07 | c | 3.2E-06 | c | 1.2E-06 | c | | 3.0E-07 | c | |
| 2.0E+00 | I | 5.7E-04 | I | | | | | V | | 1 | 0.14 | | ~Polychlorinated Biphenyls (high risk) | 1336-36-3 | 2.3E-01 | c | 9.4E-01 | c | 4.9E-03 | c | 2.1E-02 | c | | | 5.0E-01 | | | |
| 4.0E-01 | I | 1.0E-04 | I | | | | | V | | 1 | 0.14 | | ~Polychlorinated Biphenyls (low risk) | 1336-36-3 | | | | | 2.8E-02 | c | 1.2E-01 | c | 4.4E-02 | c | 5.0E-01 | 6.8E-03 | c | 7.8E-02 |
| 7.0E-02 | I | 2.0E-05 | I | | | | | V | | 1 | 0.14 | | ~Polychlorinated Biphenyls (lowest risk) | 1336-36-3 | | | | | 1.4E-01 | c | 6.1E-01 | c | | | 5.0E-01 | | | |
| 1.3E+01 | W | 3.8E-03 | W | 7.0E-06 | W | 4.0E-04 | W | | | 1 | 0.14 | | ~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77) | 32598-13-3 | 3.8E-02 | c* | 1.6E-01 | c* | 7.4E-04 | c | 3.2E-03 | c | 6.0E-03 | c* | | 9.4E-04 | c* | |
| 3.9E+01 | W | 1.1E-02 | W | 2.3E-06 | W | 1.3E-04 | W | V | | 1 | 0.14 | | ~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81) | 70362-50-4 | 1.2E-02 | c* | 4.8E-02 | c* | 2.5E-04 | c | 1.1E-03 | c | 4.0E-04 | c | | 6.2E-05 | c | |
| | | | | | | 6.0E-04 | I | | | 1 | 0.1 | | Polymeric Methylene Diphenyl Diisocyanate (PMDI) | 9016-87-9 | 8.5E+05 | nm | 3.6E+06 | nm | 6.3E-01 | n | 2.6E+00 | n | | | | | | |
| | | | | | | | | | | | | | Polynuclear Aromatic Hydrocarbons (PAHs) | | | | | | | | | | | | | | | |
| | | | | 6.0E-02 | I | | | V | | 1 | 0.13 | | ~Acenaphthene | 83-32-9 | 3.6E+03 | n | 4.5E+04 | n | | | | | 5.3E+02 | n | | 5.5E+00 | n | |
| | | | | 3.0E-01 | I | | | V | | 1 | 0.13 | | ~Anthracene | 120-12-7 | 1.8E+04 | n | 2.3E+05 | nm | | | | | 1.8E+03 | n | | 5.8E+01 | n | |
| 1.0E-01 | E | 6.0E-05 | E | | | | | V | M | 1 | 0.13 | | ~Benz[a]anthracene | 56-55-3 | 1.1E+00 | c | 2.1E+01 | c | 1.7E-02 | c | 2.0E-01 | c | 3.0E-02 | c | | 1.1E-02 | c | |
| 1.2E+00 | C | 1.1E-04 | C | | | | | | | 1 | 0.13 | | ~Benzo(j)fluoranthene | 205-82-3 | 4.2E-01 | c | 1.8E+00 | c | 2.6E-02 | c | 1.1E-01 | c | 6.5E-02 | c | | 7.8E-02 | c | |
| 1.0E+00 | I | 6.0E-04 | I | 3.0E-04 | I | 2.0E-06 | I | | M | 1 | 0.13 | | ~Benzo[a]pyrene | 50-32-8 | 1.1E-01 | c | 2.1E+00 | c | 1.7E-03 | c** | 8.8E-03 | n | 2.5E-02 | c | 2.0E-01 | 2.9E-02 | c | 2.4E-01 |
| 1.0E-01 | E | 6.0E-05 | E | | | | | | M | 1 | 0.13 | | ~Benzo[b]fluoranthene | 205-99-2 | 1.1E+00 | c | 2.1E+01 | c | 1.7E-02 | c | 2.0E-01 | c | 2.5E-01 | c | | 3.0E-01 | c | |
| 1.0E-02 | E | 6.0E-06 | E | | | | | | M | 1 | 0.13 | | ~Benzo[k]fluoranthene | 207-08-9 | 1.1E+01 | c | 2.1E+02 | c | 1.7E-01 | c | 2.0E+00 | c | 2.5E+00 | c | | 2.9E+00 | c | |
| | | | | 8.0E-02 | I | | | V | | 1 | 0.13 | | ~Chloronaphthalene, Beta- | 91-58-7 | 4.8E+03 | n | 6.0E+04 | n | | | | | 7.5E+02 | n | | 3.9E+00 | n | |
| 1.0E-03 | E | 6.0E-07 | E | | | | | | M | 1 | 0.13 | | ~Chrysene | 218-01-9 | 1.1E+02 | c | 2.1E+03 | c | 1.7E+00 | c | 2.0E+01 | c | 2.5E+01 | c | | 9.0E+00 | c | |
| 1.0E+00 | E | 6.0E-04 | E | | | | | | M | 1 | 0.13 | | ~Dibenz[a,h]anthracene | 53-70-3 | 1.1E-01 | c | 2.1E+00 | c | 1.7E-03 | c | 2.0E-02 | c | 2.5E-02 | c | | 9.6E-02 | c | |
| 1.2E+01 | C | 1.1E-03 | C | | | | | | | 1 | 0.13 | | ~Dibenzo(a,e)pyrene | 192-65-4 | 4.2E-02 | c | 1.8E-01 | c | 2.6E-03 | c | 1.1E-02 | c | 6.5E-03 | c | | 8.4E-02 | c | |
| 2.5E+02 | C | 7.1E-02 | C | | | | | | M | 1 | 0.13 | | ~Dimethylbenz(a)anthracene, 7,12- | 57-97-6 | 4.6E-04 | c | 8.4E-03 | c | 1.4E-05 | c | 1.7E-04 | c | 1.0E-04 | c | | 9.9E-05 | c | |
| | | | | 4.0E-02 | I | | | | | 1 | 0.13 | | ~Fluoranthene | 206-44-0 | 2.4E+03 | n | 3.0E+04 | n | | | | | 8.0E+02 | n | | 8.9E+01 | n | |
| | | | | 4.0E-02 | I | | | V | | 1 | 0.13 | | ~Fluorene | 86-73-7 | 2.4E+03 | n | 3.0E+04 | n | | | | | 2.9E+02 | n | | 5.4E+00 | n | |
| 1.0E-01 | E | 6.0E-05 | E | | | | | | M | 1 | 0.13 | | ~Indeno[1,2,3-cd]pyrene | 193-39-5 | 1.1E+00 | c | 2.1E+01 | c | 1.7E-02 | c | 2.0E-01 | c | 2.5E-01 | c | | 9.8E-01 | c | |
| 2.9E-02 | P | | | 7.0E-02 | A | | | V | | 1 | 0.13 | 3.9E+02 | ~Methylnaphthalene, 1- | 90-12-0 | 1.8E+01 | c | 7.3E+01 | c | | | | | 1.1E+00 | c | | 6.0E-03 | c | |
| | | | | 4.0E-03 | I | | | V | | 1 | 0.13 | | ~Methylnaphthalene, 2- | 91-57-6 | 2.4E+02 | n | 3.0E+03 | n | | | | | 3.6E+01 | n | | 1.9E-01 | n | |
| 1.2E-01 | C | 3.4E-05 | C | 2.0E-02 | I | 3.0E-03 | I | V | | 1 | 0.13 | | ~Naphthalene | 91-20-3 | 2.0E+00 | c* | 8.6E+00 | c* | 8.3E-02 | c* | 3.6E-01 | c* | 1.2E-01 | c* | | 3.8E-04 | c* | |
| 1.2E+00 | C | 1.1E-04 | C | | | | | | | 1 | 0.13 | | ~Nitropyrene, 4- | 57835-92-4 | 4.2E-01 | c | 1.8E+00 | c | 2.6E-02 | c | 1.1E-01 | c | 1.9E-02 | c | | 3.3E-03 | c | |
| | | | | 3.0E-02 | I | | | V | | 1 | 0.13 | | ~Pyrene | 129-00-0 | 1.8E+03 | n | 2.3E+04 | n | | | | | 1.2E+02 | n | | 1.3E+01 | n | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Potassium Perfluorobutane Sulfonate | 29420-49-3 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | | | |
| 1.5E-01 | I | | | 9.0E-03 | I | | | | | 1 | 0.1 | | Prochloraz | 67747-09-5 | 3.6E+00 | c | 1.5E+01 | c | | | | | 3.8E-01 | c | | 1.9E-03 | c | |
| | | | | 6.0E-03 | H | | | V | | 1 | | | Profluralin | 26399-36-0 | 4.7E+02 | n | 7.0E+03 | n | | | | | 2.6E+01 | n | | 1.6E+00 | n | |
| | | | | 1.5E-02 | I | | | | | 1 | 0.1 | | Prometon | 1610-18-0 | 9.5E+02 | n | 1.2E+04 | n | | | | | 2.5E+02 | n | | 1.2E-01 | n | |
| | | | | 4.0E-02 | O | | | | | 1 | 0.1 | | Prometryn | 7287-19-6 | 2.5E+03 | n | 3.3E+04 | n | | | | | 6.0E+02 | n | | 9.0E-01 | n | |
| | | | | 7.5E-02 | I | | | | | 1 | 0.1 | | Pronamide | 23950-58-5 | 4.7E+03 | n | 6.2E+04 | n | | | | | 1.2E+03 | n | | 1.2E+00 | n | |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Propachlor | 1918-16-7 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.5E+02 | n | | 1.5E-01 | n | |
| | | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Propanil | 709-98-8 | 3.2E+02 | n | 4.1E+03 | n | | | | | 8.2E+01 | n | | 4.5E-02 | n | |
| 1.9E-01 | O | | | 4.0E-02 | O | | | | | 1 | 0.1 | | Propargite | 2312-35-8 | 2.8E+00 | c | 1.2E+01 | c | | | | | 1.6E-01 | c | | 1.1E-02 | c | |
| | | | | 2.0E-03 | I | | | V | | 1 | | 1.1E+05 | Propargyl Alcohol | 107-19-7 | 1.6E+02 | n | 2.3E+03 | n | | | | | 4.0E+01 | n | | 8.1E-03 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Propazine | 139-40-2 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.4E+02 | n | | 3.0E-01 | n | |
| | | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Propham | 122-42-9 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.5E+02 | n | | 2.2E-01 | n | |
| | | | | 1.0E-01 | O | | | | | 1 | 0.1 | | Propiconazole | 60207-90-1 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.6E+03 | n | | 5.3E+00 | n | |
| | | | | | | 8.0E-03 | I | V | | 1 | | 3.3E+04 | Propionaldehyde | 123-38-6 | 7.5E+01 | n | 3.1E+02 | n | 8.3E+00 | n | 3.5E+01 | n | 1.7E+01 | n | | 3.4E-03 | n | |
| | | | | 1.0E-01 | X | 1.0E+00 | X | V | | 1 | | 2.6E+02 | Propyl benzene | 103-65-1 | 3.8E+03 | ns | 2.4E+04 | ns | 1.0E+03 | n | 4.4E+03 | n | 6.6E+02 | n | | 1.2E+00 | n | |
| | | | | | | 3.0E+00 | C | V | | 1 | | 3.5E+02 | Propylene | 115-07-1 | 2.2E+03 | ns | 9.3E+03 | ns | 3.1E+03 | n | 1.3E+04 | n | 6.3E+03 | n | | 6.0E+00 | n | |
| | | | | 2.0E+01 | P | | | | | 1 | 0.1 | | Propylene Glycol | 57-55-6 | 1.3E+06 | nm | 1.6E+07 | nm | | | | | 4.0E+05 | n | | 8.1E+01 | n | |
| | | | | | | 2.7E-04 | A | | | 1 | 0.1 | | Propylene Glycol Dinitrate | 6423-43-4 | 3.9E+05 | nm | 1.6E+06 | nm | 2.8E-01 | n | 1.2E+00 | n | | | | | | |
| | | | | 7.0E-01 | H | 2.0E+00 | I | V | | 1 | | 1.1E+05 | Propylene Glycol Monomethyl Ether | 107-98-2 | 4.1E+04 | n | 3.7E+05 | nms | 2.1E+03 | n | 8.8E+03 | n | 3.2E+03 | n | | 6.5E-01 | n | |
| 2.4E-01 | I | 3.7E-06 | I | | | 3.0E-02 | I | V | | 1 | | 7.8E+04 | Propylene Oxide | 75-56-9 | 2.1E+00 | c | 9.7E+00 | c | 7.6E-01 | c* | 3.3E+00 | c* | 2.7E-01 | c | | 5.6E-05 | c | |

TR=1E-06 HQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | vol | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | 1.0E-03 | I | | | V | | 1 | | 5.3E+05 | Pyridine | 110-86-1 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | | 6.8E-03 | n | |
| | | | | 5.0E-04 | I | | | | | 1 | 0.1 | | Quinalphos | 13593-03-8 | 3.2E+01 | n | 4.1E+02 | n | | | | | 5.1E+00 | n | | 4.3E-02 | n | |
| 3.0E+00 | I | | | | | | | | | 1 | 0.1 | | Quinoline | 91-22-5 | 1.8E-01 | c | 7.7E-01 | c | | | | | 2.4E-02 | c | | 7.8E-05 | c | |
| | | | | 9.0E-03 | I | | | | | 1 | 0.1 | | Quizalofop-ethyl | 76578-14-8 | 5.7E+02 | n | 7.4E+03 | n | | | | | 1.2E+02 | n | | 1.9E+00 | n | |
| | | | | | | 3.0E+04 | A | | | 1 | | | Refractory Ceramic Fibers (units in fibers) | E715557 | | | | | 3.1E+04 | G | 1.3E+05 | G | | | | | | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Resmethrin | 10453-86-8 | 1.9E+03 | n | 2.5E+04 | n | | | | | 6.7E+01 | n | | 4.2E+01 | n | |
| | | | | 5.0E-02 | H | | | V | | 1 | | | Ronnel | 299-84-3 | 3.9E+03 | n | 5.8E+04 | n | | | | | 4.1E+02 | n | | 3.7E+00 | n | |
| | | | | 4.0E-03 | I | | | | | 1 | 0.1 | | Rotenone | 83-79-4 | 2.5E+02 | n | 3.3E+03 | n | | | | | 6.1E+01 | n | | 3.2E+01 | n | |
| 2.2E-01 | C | 6.3E-05 | C | | | | | | M | 1 | 0.1 | | Safrole | 94-59-7 | 5.5E-01 | c | 1.0E+01 | c | 1.6E-02 | c | 1.9E-01 | c | 9.6E-02 | c | | 5.9E-05 | c | |
| | | | | 5.0E-03 | I | | | | | 1 | | | Selenious Acid | 7783-00-8 | 3.9E+02 | n | 5.8E+03 | n | | | | | 1.0E+02 | n | | | | |
| | | | | 5.0E-03 | I | 2.0E-02 | C | | | 1 | | | Selenium | 7782-49-2 | 3.9E+02 | n | 5.8E+03 | n | 2.1E+01 | n | 8.8E+01 | n | 1.0E+02 | n | 5.0E+01 | 5.2E-01 | n | 2.6E-01 |
| | | | | 5.0E-03 | C | 2.0E-02 | C | | | 1 | | | Selenium Sulfide | 7446-34-6 | 3.9E+02 | n | 5.8E+03 | n | 2.1E+01 | n | 8.8E+01 | n | 1.0E+02 | n | | | | |
| | | | | 1.4E-01 | O | | | | | 1 | 0.1 | | Sethoxydim | 74051-80-2 | 8.8E+03 | n | 1.1E+05 | nm | | | | | 1.6E+03 | n | | 1.4E+01 | n | |
| | | | | | | 3.0E-03 | C | | | 1 | | | Silica (crystalline, respirable) | 7631-86-9 | 4.3E+06 | nm | 1.8E+07 | nm | 3.1E+00 | n | 1.3E+01 | n | | | | | | |
| | | | | 5.0E-03 | I | | | | | 0.04 | | | Silver | 7440-22-4 | 3.9E+02 | n | 5.8E+03 | n | | | | | 9.4E+01 | n | | 8.0E-01 | n | |
| 1.2E-01 | H | | | 5.0E-03 | I | | | | | 1 | 0.1 | | Simazine | 122-34-9 | 4.5E+00 | c* | 1.9E+01 | c | | | | | 6.1E-01 | c | 4.0E+00 | 3.0E-04 | c | 2.0E-03 |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Sodium Acifluorfen | 62476-59-9 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.6E+02 | n | | 2.1E+00 | n | |
| | | | | 4.0E-03 | I | | | | | 1 | | | Sodium Azide | 26628-22-8 | 3.1E+02 | n | 4.7E+03 | n | | | | | 8.0E+01 | n | | | | |
| 2.7E-01 | H | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Sodium Diethyldithiocarbamate | 148-18-5 | 2.0E+00 | c | 8.5E+00 | c | | | | | 2.9E-01 | c | | 1.8E-04 | c | |
| | | | | 5.0E-02 | A | 1.3E-02 | C | | | 1 | | | Sodium Fluoride | 7681-49-4 | 3.9E+03 | n | 5.8E+04 | n | 1.4E+01 | n | 5.7E+01 | n | 1.0E+03 | n | 4.0E+03 | 1.5E+02 | n | 6.0E+02 |
| | | | | 2.0E-05 | I | | | | | 1 | 0.1 | | Sodium Fluoroacetate | 62-74-8 | 1.3E+00 | n | 1.6E+01 | n | | | | | 4.0E-01 | n | | 8.1E-05 | n | |
| | | | | 1.0E-03 | H | | | | | 1 | | | Sodium Metavanadate | 13718-26-8 | 7.8E+01 | n | 1.2E+03 | n | | | | | 2.0E+01 | n | | | | |
| | | | | 8.0E-04 | P | | | | | 1 | | | Sodium Tungstate | 13472-45-2 | 6.3E+01 | n | 9.3E+02 | n | | | | | 1.6E+01 | n | | | | |
| | | | | 8.0E-04 | P | | | | | 1 | | | Sodium Tungstate Dihydrate | 10213-10-2 | 6.3E+01 | n | 9.3E+02 | n | | | | | 1.6E+01 | n | | | | |
| 2.4E-02 | H | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Stirofos (Tetrachlorovinphos) | 961-11-5 | 2.3E+01 | c* | 9.6E+01 | c | | | | | 2.8E+00 | c | | 8.2E-03 | c | |
| | | | | 6.0E-01 | I | | | | | 1 | | | Strontium, Stable | 7440-24-6 | 4.7E+04 | n | 7.0E+05 | nm | | | | | 1.2E+04 | n | | 4.2E+02 | n | |
| | | | | 3.0E-04 | I | | | | | 1 | 0.1 | | Strychnine | 57-24-9 | 1.9E+01 | n | 2.5E+02 | n | | | | | 5.9E+00 | n | | 6.5E-02 | n | |
| | | | | 2.0E-01 | I | 1.0E+00 | I | V | | 1 | | 8.7E+02 | Styrene | 100-42-5 | 6.0E+03 | ns | 3.5E+04 | ns | 1.0E+03 | n | 4.4E+03 | n | 1.2E+03 | n | 1.0E+02 | 1.3E+00 | n | 1.1E-01 |
| | | | | 3.0E-03 | P | | | | | 1 | 0.1 | | Styrene-Acrylonitrile (SAN) Trimer (THNA isomer) | 57964-39-3 | 1.9E+02 | n | 2.5E+03 | n | | | | | 4.8E+01 | n | | | | |
| | | | | 3.0E-03 | P | | | | | 1 | 0.1 | | Styrene-Acrylonitrile (SAN) Trimer (THNP isomer) | 57964-40-6 | 1.9E+02 | n | 2.5E+03 | n | | | | | 4.8E+01 | n | | | | |
| | | | | 1.0E-03 | P | 2.0E-03 | X | | | 1 | 0.1 | | Sulfolane | 126-33-0 | 6.3E+01 | n | 8.2E+02 | n | 2.1E+00 | n | 8.8E+00 | n | 2.0E+01 | n | | 4.4E-03 | n | |
| | | | | 8.0E-04 | P | | | | | 1 | 0.1 | | Sulfonylbis(4-chlorobenzene), 1,1'- | 80-07-9 | 5.1E+01 | n | 6.6E+02 | n | | | | | 1.1E+01 | n | | 6.5E-02 | n | |
| | | | | | | 1.0E-03 | C | V | | 1 | | | Sulfur Trioxide | 7446-11-9 | 1.4E+06 | nm | 6.0E+06 | nm | 1.0E+00 | n | 4.4E+00 | n | 2.1E+00 | n | | | | |
| | | | | | | 1.0E-03 | C | | | 1 | | | Sulfuric Acid | 7664-93-9 | 1.4E+06 | nm | 6.0E+06 | nm | 1.0E+00 | n | 4.4E+00 | n | | | | | | |
| 2.5E-02 | I | 7.1E-06 | I | 5.0E-02 | H | | | | | 1 | 0.1 | | Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester | 140-57-8 | 2.2E+01 | c | 9.2E+01 | c | 4.0E-01 | c | 1.7E+00 | c | 1.3E+00 | c | | 1.5E-02 | c | |
| | | | | 3.0E-02 | H | | | | | 1 | 0.1 | | TCMTB | 21564-17-0 | 1.9E+03 | n | 2.5E+04 | n | | | | | 4.8E+02 | n | | 3.3E+00 | n | |
| | | | | 7.0E-02 | I | | | | | 1 | 0.1 | | Tebuthiuron | 34014-18-1 | 4.4E+03 | n | 5.7E+04 | n | | | | | 1.4E+03 | n | | 3.9E-01 | n | |
| | | | | 2.0E-02 | H | | | | | 1 | 0.1 | | Temephos | 3383-96-8 | 1.3E+03 | n | 1.6E+04 | n | | | | | 4.0E+02 | n | | 7.6E+01 | n | |
| | | | | 1.3E-02 | I | | | | | 1 | 0.1 | | Terbacil | 5902-51-2 | 8.2E+02 | n | 1.1E+04 | n | | | | | 2.5E+02 | n | | 7.5E-02 | n | |
| | | | | 2.5E-05 | H | | | V | | 1 | | 3.1E+01 | Terbufos | 13071-79-9 | 2.0E+00 | n | 2.9E+01 | n | | | | | 2.4E-01 | n | | 5.2E-04 | n | |
| | | | | 1.0E-03 | I | | | | | 1 | 0.1 | | Terbutryn | 886-50-0 | 6.3E+01 | n | 8.2E+02 | n | | | | | 1.3E+01 | n | | 1.9E-02 | n | |
| 5.0E-03 | C | 1.3E-06 | C | | | | | V | | 1 | | | Tert-Butyl Acetate | 540-88-5 | 8.1E+00 | c | 3.6E+01 | c | 2.2E+00 | c | 9.4E+00 | c | 3.3E+00 | c | | 7.6E-04 | c | |
| | | | | 1.0E-04 | I | | | | | 1 | 0.1 | | Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47) | 5436-43-1 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | 5.3E-02 | n | |
| | | | | 3.0E-04 | I | | | V | | 1 | | | Tetrachlorobenzene, 1,2,4,5- | 95-94-3 | 2.3E+01 | n | 3.5E+02 | n | | | | | 1.7E+00 | n | | 7.9E-03 | n | |
| 2.6E-02 | I | 7.4E-06 | I | 3.0E-02 | I | | | V | | 1 | | 6.8E+02 | Tetrachloroethane, 1,1,1,2- | 630-20-6 | 2.0E+00 | c | 8.8E+00 | c | 3.8E-01 | c | 1.7E+00 | c | 5.7E-01 | c | | 2.2E-04 | c | |
| 2.0E-01 | I | 5.8E-05 | C | 2.0E-02 | I | | | V | | 1 | | 1.9E+03 | Tetrachloroethane, 1,1,2,2- | 79-34-5 | 6.0E-01 | c | 2.7E+00 | c | 4.8E-02 | c | 2.1E-01 | c | 7.6E-02 | c | | 3.0E-05 | c | |
| 2.1E-03 | I | 2.6E-07 | I | 6.0E-03 | I | 4.0E-02 | I | V | | 1 | | 1.7E+02 | Tetrachloroethylene | 127-18-4 | 2.4E+01 | c** | 1.0E+02 | c** | 1.1E+01 | c** | 4.7E+01 | c** | 1.1E+01 | c** | 5.0E+00 | 5.1E-03 | c** | 2.3E-03 |
| | | | | 3.0E-02 | I | | | | | 1 | 0.1 | | Tetrachlorophenol, 2,3,4,6- | 58-90-2 | 1.9E+03 | n | 2.5E+04 | n | | | | | 2.4E+02 | n | | 1.8E-01 | n | |
| 1.6E+01 | X | | | 6.0E-05 | X | | | V | | 1 | | | Tetrachlorotoluene, p- alpha, alpha, alpha- | 5216-25-1 | 4.3E-02 | c | 2.0E-01 | c | | | | | 1.7E-03 | c | | 5.7E-06 | c | |
| | | | | 5.0E-04 | I | | | | | 1 | 0.1 | | Tetraethyl Dithiopyrophosphate | 3689-24-5 | 3.2E+01 | n | 4.1E+02 | n | | | | | 7.1E+00 | n | | 5.2E-03 | n | |
| | | | | | | 8.0E+01 | I | V | | 1 | | 2.1E+03 | Tetrafluoroethane, 1,1,1,2- | 811-97-2 | 1.0E+05 | nms | 4.3E+05 | nms | 8.3E+04 | n | 3.5E+05 | n | 1.7E+05 | n | | 9.3E+01 | n | |
| | | | | 1.0E-04 | X | | | | | 1 | 0.1 | | Tetramethylphosphoramide, -N,N,N',N" (TMPA) | 16853-36-4 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.0E+00 | n | | | | |
| | | | | 2.0E-03 | P | | | | | 1 | 0.00065 | | Tetryl (Trinitrophenylmethylnitramine) | 479-45-8 | 1.6E+02 | n | 2.3E+03 | n | | | | | 3.9E+01 | n | | 3.7E-01 | n | |
| | | | | 2.0E-05 | G | | | | | 1 | | | Thallic Oxide | 1314-32-5 | 1.6E+00 | n | 2.3E+01 | n | | | | | 4.0E-01 | n | | | | |
| | | | | 1.0E-05 | X | | | | | 1 | | | Thallium (I) Nitrate | 10102-45-1 | 7.8E-01 | n | 1.2E+01 | n | | | | | 2.0E-01 | n | | | | |
| | | | | 1.0E-05 | X | | | | | 1 | | | Thallium (Soluble Salts) | 7440-28-0 | 7.8E-01 | n | 1.2E+01 | n | | | | | 2.0E-01 | n | 2.0E+00 | 1.4E-02 | n | 1.4E-01 |
| | | | | 1.0E-05 | X | | | V | | 1 | | | Thallium Acetate | 563-68-8 | 7.8E-01 | n | 1.2E+01 | n | | | | | 2.0E-01 | n | | 4.1E-05 | n | |
| | | | | 2.0E-05 | X | | | V | | 1 | | | Thallium Carbonate | 6533-73-9 | 1.6E+00 | n | 2.3E+01 | n | | | | | 4.0E-01 | n | | 8.3E-05 | n | |
| | | | | 1.0E-05 | X | | | | | 1 | | | Thallium Chloride | 7791-12-0 | 7.8E-01 | n | 1.2E+01 | n | | | | | 2.0E-01 | n | | | | |
| | | | | 1.0E-05 | G | | | | | 1 | | | Thallium Selenite | 12039-52-0 | 7.8E-01 | n | 1.2E+01 | n | | | | | 2.0E-01 | n | | | | |
| | | | | 2.0E-05 | X | | | | | 1 | | | Thallium Sulfate | 7446-18-6 | 1.6E+00 | n | 2.3E+01 | n | | | | | 4.0E-01 | n | | | | |
| | | | | 4.3E-02 | O | | | | | 1 | 0.1 | | Thifensulfuron-methyl | 79277-27-3 | 2.7E+03 | n | 3.5E+04 | n | | | | | 8.6E+02 | n | | 2.6E-01 | n | |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Thiobencarb | 28249-77-6 | 6.3E+02 | n | 8.2E+03 | n | | | | | 1.6E+02 | n | | 5.5E-01 | n | |
| | | | | 7.0E-02 | X | | | | | 1 | 0.0075 | | Thiodiglycol | 111-48-8 | 5.4E+03 | n | 7.9E+04 | n | | | | | 1.4E+03 | n | | 2.8E-01 | n | |
| | | | | 3.0E-04 | H | | | | | 1 | 0.1 | | Thiofanox | 39196-18-4 | 1.9E+01 | n | 2.5E+02 | n | | | | | 5.3E+00 | n | | 1.8E-03 | n | |
| 1.2E-02 | O | | | 2.7E-02 | O | | | | | 1 | 0.1 | | Thiophanate, Methyl | 23564-05-8 | 4.7E+01 | c* | 2.0E+02 | c | | | | | 6.7E+00 | c* | | 5.7E-03 | c* | |
| | | | | 1.5E-02 | O | | | | | 1 | 0.1 | | Thiram | 137-26-8 | 9.5E+02 | n | 1.2E+04 | n | | | | | 2.9E+02 | n | | 4.2E-01 | n | |
| | | | | 6.0E-01 | H | | | | | 1 | | | Tin | 7440-31-5 | 4.7E+04 | n | 7.0E+05 | nm | | | | | 1.2E+04 | n | | 3.0E+03 | n | |
| | | | | | | 1.0E-04 | A | V | | 1 | | | Titanium Tetrachloride | 7550-45-0 | 1.4E+05 | nm | 6.0E+05 | nm | 1.0E-01 | n | 4.4E-01 | n | 2.1E-01 | n | | | | |
| | | | | 8.0E-02 | I | 5.0E+00 | I | V | | 1 | | 8.2E+02 | Toluene | 108-88-3 | 4.9E+03 | ns | 4.7E+04 | ns | 5.2E+03 | n | 2.2E+04 | n | 1.1E+03 | n | 1.0E+03 | 7.6E-01 | n | 6.9E-01 |
| 3.9E-02 | C | 1.1E-05 | C | | | 8.0E-06 | C | V | | 1 | | | Toluene-2,4-diisocyanate | 584-84-9 | 6.4E+00 | n | 2.7E+01 | n | 8.3E-03 | n | 3.5E-02 | n | 1.7E-02 | n | | 2.5E-04 | n | |
| 1.8E-01 | X | | | 2.0E-04 | X | | | | | 1 | 0.1 | | Toluene-2,5-diamine | 95-70-5 | 3.0E+00 | c** | 1.3E+01 | c* | | | | | 4.3E-01 | c** | | 1.3E-04 | c** | |
| 3.9E-02 | C | 1.1E-05 | C | | | 8.0E-06 | C | V | | 1 | | 1.7E+03 | Toluene-2,6-diisocyanate | 91-08-7 | 5.3E+00 | n | 2.2E+01 | n | 8.3E-03 | n | 3.5E-02 | n | 1.7E-02 | n | | 2.6E-04 | n | |
| | | | | 5.0E-03 | P | | | | | 1 | 0.1 | | Toluic Acid, p- | 99-94-5 | 3.2E+02 | n | 4.1E+03 | n | | | | | 9.0E+01 | n | | 2.3E-02 | n | |
| 1.6E-02 | P | 5.1E-05 | C | | | | | | | 1 | 0.1 | | Toluidine, o- (Methylaniline, 2-) | 95-53-4 | 3.4E+01 | c | 1.4E+02 | c | 5.5E-02 | c | 2.4E-01 | c | 4.7E+00 | c | | 2.0E-03 | c | |
| 3.0E-02 | P | | | 4.0E-03 | X | | | | | 1 | 0.1 | | Toluidine, p- | 106-49-0 | 1.8E+01 | c* | 7.7E+01 | c* | | | | | 2.5E+00 | c* | | 1.1E-03 | c* | |
| | | | | 3.0E+00 | P | | | V | | 1 | | 3.4E-01 | Total Petroleum Hydrocarbons (Aliphatic High) | E1790670 | 2.3E+05 | nms | 3.5E+06 | nms | | | | | 6.0E+04 | n | | 2.4E+03 | n | |

R=1E-06 THQ=1.0

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; W = TEF applied; E = RPF applied; G = user's guide Section 5; M = mutagen; V = volatile; R = RBA applied ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = ceiling limit exceeded; s = Csat exceeded.

| Toxicity and Chemical-specific Information | | | | | | | | | | | | Contaminant | | Screening Levels | | | | | | | | | | Protection of Ground Water SSLs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SFO (mg/kg-day)$^{-1}$ | key | IUR (ug/m$^3$)$^{-1}$ | key | $RfD_o$ (mg/kg-day) | key | $RfC_i$ (mg/m$^3$) | key | volatile | mutagen | GIABS | $ABS_d$ | $C_{sat}$ (mg/kg) | Analyte | CAS No. | Resident Soil (mg/kg) | key | Industrial Soil (mg/kg) | key | Resident Air (ug/m$^3$) | key | Industrial Air (ug/m$^3$) | key | Tapwater (ug/L) | key | MCL (ug/L) | Risk-based SSL (mg/kg) | key | MCL-based SSL (mg/kg) |
| | | | | | | 6.0E-01 | P | V | | 1 | | 1.4E+02 | Total Petroleum Hydrocarbons (Aliphatic Low) | E1790666 | 5.2E+02 | ns | 2.2E+03 | ns | 6.3E+02 | n | 2.6E+03 | n | 1.3E+03 | n | | 8.8E+00 | n | |
| | | | | 1.0E-02 | X | 1.0E-01 | P | V | | 1 | | 6.9E+00 | Total Petroleum Hydrocarbons (Aliphatic Medium) | E1790668 | 9.6E+01 | ns | 4.4E+02 | ns | 1.0E+02 | n | 4.4E+02 | n | 1.0E+02 | n | | 1.5E+00 | n | |
| | | | | 4.0E-02 | P | | | | | 1 | 0.13 | | Total Petroleum Hydrocarbons (Aromatic High) | E1790676 | 2.4E+03 | n | 3.0E+04 | n | | | | | 8.0E+02 | n | | 8.9E+01 | n | |
| | | | | 4.0E-03 | P | 3.0E-02 | P | V | | 1 | | 1.8E+03 | Total Petroleum Hydrocarbons (Aromatic Low) | E1790672 | 8.2E+01 | n | 4.2E+02 | n | 3.1E+01 | n | 1.3E+02 | n | 3.3E+01 | n | | 1.7E-02 | n | |
| | | | | 4.0E-03 | P | 3.0E-03 | P | V | | 1 | 0.13 | | Total Petroleum Hydrocarbons (Aromatic Medium) | E1790674 | 9.7E+01 | n | 5.6E+02 | n | 3.1E+00 | n | 1.3E+01 | n | 5.5E+00 | n | | 2.3E-02 | n | |
| 1.1E+00 | I | 3.2E-04 | I | 9.0E-05 | P | | | | | 1 | 0.1 | | Toxaphene | 8001-35-2 | 4.9E-01 | c* | 2.1E+00 | c* | 8.8E-03 | c | 3.8E-02 | c | 7.1E-02 | c* | 3.0E+00 | 1.1E-02 | c* | 4.6E-01 |
| | | | | 3.0E-05 | X | | | | | 1 | 0.1 | | Toxaphene, Weathered | E1841606 | 1.9E+00 | n | 2.5E+01 | n | | | | | 6.0E-01 | n | | 9.3E-02 | n | |
| | | | | 7.5E-03 | I | | | | | 1 | 0.1 | | Tralomethrin | 66841-25-6 | 4.7E+02 | n | 6.2E+03 | n | | | | | 1.5E+02 | n | | 5.8E+01 | n | |
| | | | | 3.0E-04 | A | | | V | | 1 | | | Tri-n-butyltin | 688-73-3 | 2.3E+01 | n | 3.5E+02 | n | | | | | 3.7E+00 | n | | 8.2E-02 | n | |
| | | | | 8.0E+01 | X | | | | | 1 | 0.1 | | Triacetin | 102-76-1 | 5.1E+06 | nm | 6.6E+07 | nm | | | | | 1.6E+06 | n | | 4.5E+02 | n | |
| | | | | 3.4E-02 | O | | | | | 1 | 0.1 | | Triadimefon | 43121-43-3 | 2.1E+03 | n | 2.8E+04 | n | | | | | 6.3E+02 | n | | 5.0E-01 | n | |
| 7.2E-02 | O | | | 2.5E-02 | O | | | V | | 1 | | | Triallate | 2303-17-5 | 9.7E+00 | c | 4.6E+01 | c | | | | | 4.7E-01 | c | | 1.0E-03 | c | |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Triasulfuron | 82097-50-5 | 6.3E+02 | n | 8.2E+03 | n | | | | | 2.0E+02 | n | | 2.1E-01 | n | |
| | | | | 8.0E-03 | I | | | | | 1 | 0.1 | | Tribenuron-methyl | 101200-48-0 | 5.1E+02 | n | 6.6E+03 | n | | | | | 1.6E+02 | n | | 6.1E-02 | n | |
| | | | | 5.0E-03 | I | | | V | | 1 | | | Tribromobenzene, 1,2,4- | 615-54-3 | 3.9E+02 | n | 5.8E+03 | n | | | | | 4.5E+01 | n | | 6.4E-02 | n | |
| | | | | 9.0E-03 | X | | | | | 1 | 0.1 | | Tribromophenol, 2,4,6- | 118-79-6 | 5.7E+02 | n | 7.4E+03 | n | | | | | 1.2E+02 | n | | 2.2E-01 | n | |
| | | | | 1.0E-04 | O | | | | | 1 | 0.1 | | Tribufos | 78-48-8 | 6.3E+00 | n | 8.2E+01 | n | | | | | 2.8E-01 | n | | 1.4E-03 | n | |
| 9.0E-03 | P | | | 1.0E-02 | P | | | | | 1 | 0.1 | | Tributyl Phosphate | 126-73-8 | 6.0E+01 | c* | 2.6E+02 | c* | | | | | 5.2E+00 | c* | | 2.5E-02 | c* | |
| | | | | 3.0E-04 | P | | | | | 1 | 0.1 | | Tributyltin Compounds | E1790678 | 1.9E+01 | n | 2.5E+02 | n | | | | | 6.0E+00 | n | | | | |
| | | | | 3.0E-04 | I | | | | | 1 | 0.1 | | Tributyltin Oxide | 56-35-9 | 1.9E+01 | n | 2.5E+02 | n | | | | | 5.7E+00 | n | | 2.9E+02 | n | |
| | | | | | | | | | | | | | Trichloramine | 10025-85-1 | | | | | | | | | | | 4.0E+03(G) | | | |
| | | | | 3.0E+01 | I | 5.0E+00 | P | V | | 1 | | 9.1E+02 | Trichloro-1,2,2-trifluoroethane, 1,1,2- | 76-13-1 | 6.7E+03 | ns | 2.8E+04 | ns | 5.2E+03 | n | 2.2E+04 | n | 1.0E+04 | n | | 2.6E+01 | n | |
| 7.0E-02 | I | | | 2.0E-02 | I | | | | | 1 | 0.1 | | Trichloroacetic Acid | 76-03-9 | 7.8E+00 | c | 3.3E+01 | c | | | | | 1.1E+00 | c | 6.0E+01(G) | 2.2E-04 | c | 1.2E-02 |
| 2.9E-02 | H | | | | | | | | | 1 | 0.1 | | Trichloroaniline HCl, 2,4,6- | 33663-50-2 | 1.9E+01 | c | 7.9E+01 | c | | | | | 2.7E+00 | c | | 7.4E-03 | c | |
| 7.0E-03 | X | | | 3.0E-05 | X | | | | | 1 | 0.1 | | Trichloroaniline, 2,4,6- | 634-93-5 | 1.9E+00 | n | 2.5E+01 | n | | | | | 4.0E-01 | n | | 3.6E-03 | n | |
| | | | | 8.0E-04 | X | | | V | | 1 | | | Trichlorobenzene, 1,2,3- | 87-61-6 | 6.3E+01 | n | 9.3E+02 | n | | | | | 7.0E+00 | n | | 2.1E-02 | n | |
| 2.9E-02 | P | | | 1.0E-02 | I | 2.0E-03 | P | V | | 1 | | 4.0E+02 | Trichlorobenzene, 1,2,4- | 120-82-1 | 2.4E+01 | c** | 1.1E+02 | c** | 2.1E+00 | n | 8.8E+00 | n | 1.2E+00 | c** | 7.0E+01 | 3.4E-03 | c** | 2.0E-01 |
| | | | | 2.0E+00 | I | 5.0E+00 | I | V | | 1 | | 6.4E+02 | Trichloroethane, 1,1,1- | 71-55-6 | 8.1E+03 | ns | 3.6E+04 | ns | 5.2E+03 | n | 2.2E+04 | n | 8.0E+03 | n | 2.0E+02 | 2.8E+00 | n | 7.0E-02 |
| 5.7E-02 | I | 1.6E-05 | I | 4.0E-03 | I | 2.0E-04 | X | V | | 1 | | 2.2E+03 | Trichloroethane, 1,1,2- | 79-00-5 | 1.1E+00 | c** | 5.0E+00 | c** | 1.8E-01 | c** | 7.7E-01 | c** | 2.8E-01 | c** | 5.0E+00 | 8.9E-05 | c** | 1.6E-03 |
| 4.6E-02 | I | 4.1E-06 | I | 5.0E-04 | I | 2.0E-03 | I | V | M | 1 | | 6.9E+02 | Trichloroethylene | 79-01-6 | 9.4E-01 | c** | 6.0E+00 | c** | 4.8E-01 | c** | 3.0E+00 | c** | 4.9E-01 | c** | 5.0E+00 | 1.8E-04 | c** | 1.8E-03 |
| | | | | 3.0E-01 | I | | | V | | 1 | | 1.2E+03 | Trichlorofluoromethane | 75-69-4 | 2.3E+04 | ns | 3.5E+05 | nms | | | | | 5.2E+03 | n | | 3.3E+00 | n | |
| | | | | 1.0E-01 | I | | | | | 1 | 0.1 | | Trichlorophenol, 2,4,5- | 95-95-4 | 6.3E+03 | n | 8.2E+04 | n | | | | | 1.2E+03 | n | | 4.0E+00 | n | |
| 1.1E-02 | I | 3.1E-06 | I | 1.0E-03 | P | | | | | 1 | 0.1 | | Trichlorophenol, 2,4,6- | 88-06-2 | 4.9E+01 | c** | 2.1E+02 | c** | 9.1E-01 | c | 4.0E+00 | c | 4.1E+00 | c** | | 4.0E-03 | c** | |
| | | | | 1.0E-02 | I | | | | | 1 | 0.1 | | Trichlorophenoxyacetic Acid, 2,4,5- | 93-76-5 | 6.3E+02 | n | 8.2E+03 | n | | | | | 1.6E+02 | n | | 6.8E-02 | n | |
| | | | | 8.0E-03 | I | | | | | 1 | 0.1 | | Trichlorophenoxypropionic acid, -2,4,5 | 93-72-1 | 5.1E+02 | n | 6.6E+03 | n | | | | | 1.1E+02 | n | 5.0E+01 | 6.1E-02 | n | 2.8E-02 |
| | | | | 5.0E-03 | I | | | V | | 1 | | 1.3E+03 | Trichloropropane, 1,1,2- | 598-77-6 | 3.9E+02 | n | 5.8E+03 | ns | | | | | 8.8E+01 | n | | 3.5E-02 | n | |
| 3.0E+01 | I | | | 4.0E-03 | I | 3.0E-04 | I | V | M | 1 | | 1.4E+03 | Trichloropropane, 1,2,3- | 96-18-4 | 5.1E-03 | c | 1.1E-01 | c | 3.1E-01 | n | 1.3E+00 | n | 7.5E-04 | c | | 3.2E-07 | c | |
| | | | | 3.0E-03 | X | 3.0E-04 | P | V | | 1 | | 3.1E+02 | Trichloropropene, 1,2,3- | 96-19-5 | 7.3E-01 | n | 3.1E+00 | n | 3.1E-01 | n | 1.3E+00 | n | 6.2E-01 | n | | 3.1E-04 | n | |
| | | | | 2.0E-02 | A | | | | | 1 | 0.1 | | Tricresyl Phosphate (TCP) | 1330-78-5 | 1.3E+03 | n | 1.6E+04 | n | | | | | 1.6E+02 | n | | 1.5E+01 | n | |
| | | | | 3.0E-03 | I | | | | | 1 | 0.1 | | Tridiphane | 58138-08-2 | 1.9E+02 | n | 2.5E+03 | n | | | | | 1.8E+01 | n | | 1.3E-01 | n | |
| | | | | | | 7.0E-03 | I | V | | 1 | | 2.8E+04 | Triethylamine | 121-44-8 | 1.2E+02 | n | 4.8E+02 | n | 7.3E+00 | n | 3.1E+01 | n | 1.5E+01 | n | | 4.4E-03 | n | |
| | | | | 2.0E+00 | P | | | | | 1 | 0.1 | | Triethylene Glycol | 112-27-6 | 1.3E+05 | nm | 1.6E+06 | nm | | | | | 4.0E+04 | n | | 8.8E+00 | n | |
| | | | | | | 2.0E+01 | P | V | | 1 | | 4.8E+03 | Trifluoroethane, 1,1,1- | 420-46-2 | 1.5E+04 | ns | 6.2E+04 | ns | 2.1E+04 | n | 8.8E+04 | n | 4.2E+04 | n | | 1.3E+02 | n | |
| 7.7E-03 | I | | | 7.5E-03 | I | | | V | | 1 | | | Trifluralin | 1582-09-8 | 9.0E+01 | c** | 4.2E+02 | c* | | | | | 2.6E+00 | c* | | 8.4E-02 | c* | |
| 2.0E-02 | P | | | 1.0E-02 | P | | | | | 1 | 0.1 | | Trimethyl Phosphate | 512-56-1 | 2.7E+01 | c* | 1.1E+02 | c* | | | | | 3.9E+00 | c* | | 8.6E-04 | c* | |
| | | | | 1.0E-02 | I | 6.0E-02 | I | V | | 1 | | 2.9E+02 | Trimethylbenzene, 1,2,3- | 526-73-8 | 3.4E+02 | ns | 2.0E+03 | ns | 6.3E+01 | n | 2.6E+02 | n | 5.5E+01 | n | | 8.1E-02 | n | |
| | | | | 1.0E-02 | I | 6.0E-02 | I | V | | 1 | | 2.2E+02 | Trimethylbenzene, 1,2,4- | 95-63-6 | 3.0E+02 | ns | 1.8E+03 | ns | 6.3E+01 | n | 2.6E+02 | n | 5.6E+01 | n | | 8.1E-02 | n | |
| | | | | 1.0E-02 | I | 6.0E-02 | I | V | | 1 | | 1.8E+02 | Trimethylbenzene, 1,3,5- | 108-67-8 | 2.7E+02 | ns | 1.5E+03 | ns | 6.3E+01 | n | 2.6E+02 | n | 6.0E+01 | n | | 8.7E-02 | n | |
| | | | | 1.0E-02 | X | | | V | | 1 | | 3.0E+01 | Trimethylpentene, 2,4,4- | 25167-70-8 | 7.8E+02 | ns | 1.2E+04 | ns | | | | | 3.8E+01 | n | | 1.3E-01 | n | |
| | | | | 3.0E-02 | I | | | | | 1 | 0.019 | | Trinitrobenzene, 1,3,5- | 99-35-4 | 2.2E+03 | n | 3.2E+04 | n | | | | | 5.9E+02 | n | | 2.1E+00 | n | |
| 3.0E-02 | I | | | 5.0E-04 | I | | | | | 1 | 0.032 | | Trinitrotoluene, 2,4,6- | 118-96-7 | 2.1E+01 | c** | 9.6E+01 | c** | | | | | 2.5E+00 | c** | | 1.5E-02 | c** | |
| | | | | 2.0E-02 | P | | | | | 1 | 0.1 | | Triphenylphosphine Oxide | 791-28-6 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.6E+02 | n | | 1.5E+00 | n | |
| | | | | 2.0E-02 | A | | | | | 1 | 0.1 | | Tris(1,3-Dichloro-2-propyl) Phosphate | 13674-87-8 | 1.3E+03 | n | 1.6E+04 | n | | | | | 3.6E+02 | n | | 8.0E+00 | n | |
| | | | | 1.0E-02 | X | | | | | 1 | 0.1 | | Tris(1-chloro-2-propyl)phosphate | 13674-84-5 | 6.3E+02 | n | 8.2E+03 | n | | | | | 1.9E+02 | n | | 6.5E-01 | n | |
| 2.3E+00 | C | 6.6E-04 | C | | | | | V | | 1 | | 4.7E+02 | Tris(2,3-dibromopropyl)phosphate | 126-72-7 | 2.8E-01 | c | 1.3E+00 | c | 4.3E-03 | c | 1.9E-02 | c | 6.8E-03 | c | | 1.3E-04 | c | |
| 2.0E-02 | P | | | 7.0E-03 | P | | | | | 1 | 0.1 | | Tris(2-chloroethyl)phosphate | 115-96-8 | 2.7E+01 | c* | 1.1E+02 | c* | | | | | 3.8E+00 | c* | | 3.8E-03 | c* | |
| 3.2E-03 | P | | | 1.0E-01 | P | | | | | 1 | 0.1 | | Tris(2-ethylhexyl)phosphate | 78-42-2 | 1.7E+02 | c* | 7.2E+02 | c | | | | | 2.4E+01 | c* | | 1.2E+02 | c* | |
| | | | | 8.0E-04 | P | | | | | 1 | | | Tungsten | 7440-33-7 | 6.3E+01 | n | 9.3E+02 | n | | | | | 1.6E+01 | n | | 2.4E+00 | n | |
| | | | | 2.0E-04 | A | 4.0E-05 | A | | | 1 | | | Uranium | 7440-61-1 | 1.6E+01 | n | 2.3E+02 | n | 4.2E-02 | n | 1.8E-01 | n | 4.0E+00 | n | 3.0E+01 | 1.8E+00 | n | 1.4E+01 |
| 1.0E+00 | C | 2.9E-04 | C | | | | | | M | 1 | 0.1 | | Urethane | 51-79-6 | 1.2E-01 | c | 2.3E+00 | c | 3.5E-03 | c | 4.2E-02 | c | 2.5E-02 | c | | 5.6E-06 | c | |
| | | 8.3E-03 | P | 9.0E-03 | I | 7.0E-06 | P | | | 0.026 | | | Vanadium Pentoxide | 1314-62-1 | 4.6E+02 | c** | 2.0E+03 | c** | 3.4E-04 | c* | 1.5E-03 | c* | 1.5E+02 | n | | | | |
| | | | | 5.0E-03 | G | 1.0E-04 | A | | | 0.026 | | | Vanadium and Compounds | 7440-62-2 | 3.9E+02 | n | 5.8E+03 | n | 1.0E-01 | n | 4.4E-01 | n | 8.6E+01 | n | | 8.6E+01 | n | |
| | | | | 1.0E-03 | I | | | V | | 1 | | | Vernolate | 1929-77-7 | 7.8E+01 | n | 1.2E+03 | n | | | | | 1.1E+01 | n | | 8.9E-03 | n | |
| | | | | 1.2E-03 | O | | | | | 1 | 0.1 | | Vinclozolin | 50471-44-8 | 7.6E+01 | n | 9.8E+02 | n | | | | | 2.1E+01 | n | | 1.6E-02 | n | |
| | | | | 1.0E+00 | H | 2.0E-01 | I | V | | 1 | | 2.8E+03 | Vinyl Acetate | 108-05-4 | 9.1E+02 | n | 3.8E+03 | ns | 2.1E+02 | n | 8.8E+02 | n | 4.1E+02 | n | | 8.7E-02 | n | |
| | | 1.5E-05 | P | | | 3.0E-03 | I | V | | 1 | | 2.5E+03 | Vinyl Bromide | 593-60-2 | 2.6E-01 | c* | 1.1E+00 | c* | 1.9E-01 | c* | 8.2E-01 | c* | 3.7E-01 | c* | | 1.1E-04 | c* | |
| 7.2E-01 | I | 4.4E-06 | I | 3.0E-03 | I | 1.0E-01 | I | V | M | 1 | | 3.9E+03 | Vinyl Chloride | 75-01-4 | 5.9E-02 | c | 1.7E+00 | c | 1.7E-01 | c | 2.8E+00 | c | 1.9E-02 | c | 2.0E+00 | 6.5E-06 | c | 6.9E-04 |
| | | | | 3.0E-04 | I | | | | | 1 | 0.1 | | Warfarin | 81-81-2 | 1.9E+01 | n | 2.5E+02 | n | | | | | 5.6E+00 | n | | 5.9E-03 | n | |
| | | | | 2.0E-01 | G | 1.0E-01 | G | V | | 1 | | 3.9E+02 | Xylene, m- | 108-38-3 | 5.5E+02 | ns | 2.4E+03 | ns | 1.0E+02 | n | 4.4E+02 | n | 1.9E+02 | n | | 1.9E-01 | n | |
| | | | | 2.0E-01 | G | 1.0E-01 | G | V | | 1 | | 4.3E+02 | Xylene, o- | 95-47-6 | 6.5E+02 | ns | 2.8E+03 | ns | 1.0E+02 | n | 4.4E+02 | n | 1.9E+02 | n | | 1.9E-01 | n | |
| | | | | 2.0E-01 | G | 1.0E-01 | G | V | | 1 | | 3.9E+02 | Xylene, p- | 106-42-3 | 5.6E+02 | ns | 2.4E+03 | ns | 1.0E+02 | n | 4.4E+02 | n | 1.9E+02 | n | | 1.9E-01 | n | |
| | | | | 2.0E-01 | I | 1.0E-01 | I | V | | 1 | | 2.6E+02 | Xylenes | 1330-20-7 | 5.8E+02 | ns | 2.5E+03 | ns | 1.0E+02 | n | 4.4E+02 | n | 1.9E+02 | n | 1.0E+04 | 1.9E-01 | n | 9.9E+00 |
| | | | | 3.0E-04 | I | | | | | 1 | | | Zinc Phosphide | 1314-84-7 | 2.3E+01 | n | 3.5E+02 | n | | | | | 6.0E+00 | n | | | | |
| | | | | 3.0E-01 | I | | | | | 1 | | | Zinc and Compounds | 7440-66-6 | 2.3E+04 | n | 3.5E+05 | nm | | | | | 6.0E+03 | n | | 3.7E+02 | n | |
| | | | | 5.0E-02 | I | | | | | 1 | 0.1 | | Zineb | 12122-67-7 | 3.2E+03 | n | 4.1E+04 | n | | | | | 9.9E+02 | n | | 2.9E+00 | n | |
| | | | | 8.0E-05 | X | | | | | 1 | | | Zirconium | 7440-67-7 | 6.3E+00 | n | 9.3E+01 | n | | | | | 1.6E+00 | n | | 4.8E+00 | n | |

TR=1E-06 THQ=1.0

NSW EPA

# Waste Classification Guidelines
# Part 1: Classifying waste

November 2014

## Table 1: CT1 & CT2 values for classifying waste by chemical assessment without the TCLP test

*For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.*

| | **Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP** | | |
|---|---|---|---|
| | **General solid waste[1]** | **Restricted solid waste** | |
| **Contaminant** | **CT1 (mg/kg)** | **CT2 (mg/kg)** | **CAS Registry Number** |
| Arsenic | 100 | 400 | |
| Benzene | 10 | 40 | 71-43-2 |
| Benzo(a)pyrene[2] | 0.8 | 3.2 | 50-32-8 |
| Beryllium | 20 | 80 | |
| Cadmium | 20 | 80 | |
| Carbon tetrachloride | 10 | 40 | 56-23-5 |
| Chlorobenzene | 2,000 | 8,000 | 108-90-7 |
| Chloroform | 120 | 480 | 67-66-3 |
| Chlorpyrifos | 4 | 16 | 2921-88-2 |
| Chromium (VI)[3] | 100 | 400 | |
| m-Cresol | 4,000 | 16,000 | 108-39-4 |
| o-Cresol | 4,000 | 16,000 | 95-48-7 |
| p-Cresol | 4,000 | 16,000 | 106-44-5 |
| Cresol (total) | 4,000 | 16,000 | 1319-77-3 |
| Cyanide (amenable)[4] | 70 | 280 | |
| Cyanide (total) | 320 | 1,280 | |
| 2,4-D | 200 | 800 | 94-75-7 |
| 1,2-Dichlorobenzene | 86 | 344 | 95-50-1 |
| 1,4-Dichlorobenzene | 150 | 600 | 106-46-7 |
| 1,2-Dichloroethane | 10 | 40 | 107-06-2 |
| 1,1-Dichloroethylene | 14 | 56 | 75-35-4 |
| Dichloromethane | 172 | 688 | 75-09-2 |
| 2,4-Dinitrotoluene | 2.6 | 10.4 | 121-14-2 |
| Endosulfan[5] | 60 | 240 | See below[5] |
| Ethylbenzene | 600 | 2,400 | 100-41-4 |
| Fluoride | 3,000 | 12,000 | |
| Fluroxypyr | 40 | 160 | 69377-81-7 |
| Lead | 100 | 400 | |

| Contaminant | Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP | | CAS Registry Number |
|---|---|---|---|
| | General solid waste[1] | Restricted solid waste | |
| | CT1 (mg/kg) | CT2 (mg/kg) | |
| Mercury | 4 | 16 | |
| Methyl ethyl ketone | 4,000 | 16,000 | 78-93-3 |
| Moderately harmful pesticides[6] (total) | 250 | 1,000 | See below[6] |
| Molybdenum | 100 | 400 | |
| Nickel | 40 | 160 | |
| Nitrobenzene | 40 | 160 | 98-95-3 |
| C6–C9 petroleum hydrocarbons[7] | 650 | 2,600 | |
| C10–C36 petroleum hydrocarbons[7] | 10,000 | 40,000 | |
| Phenol (non-halogenated) | 288 | 1,152 | 108-95-2 |
| Picloram | 60 | 240 | 1918-02-1 |
| Plasticiser compounds[8] | 20 | 80 | See below[8] |
| Polychlorinated biphenyls[9] | <50 | <50 | 1336-36-3 |
| Polycyclic aromatic hydrocarbons (total)[10] | 200 | 800 | |
| Scheduled chemicals[11] | <50 | <50 | |
| Selenium | 20 | 80 | |
| Silver | 100 | 400 | |
| Styrene (vinyl benzene) | 60 | 240 | 100-42-5 |
| Tebuconazole | 128 | 512 | 107534-96-3 |
| 1,2,3,4-Tetrachlorobenzene | 10 | 40 | 634-66-2 |
| 1,1,1,2-Tetrachloroethane | 200 | 800 | 630-20-6 |
| 1,1,2,2-Tetrachloroethane | 26 | 104 | 79-34-5 |
| Tetrachloroethylene | 14 | 56 | 127-18-4 |
| Toluene | 288 | 1,152 | 108-88-3 |
| 1,1,1-Trichloroethane | 600 | 2,400 | 71-55-6 |
| 1,1,2-Trichloroethane | 24 | 96 | 79-00-5 |
| Trichloroethylene | 10 | 40 | 79-01-6 |
| 2,4,5-Trichlorophenol | 8,000 | 32,000 | 95-95-4 |
| 2,4,6-Trichlorophenol | 40 | 160 | 88-06-2 |
| Triclopyr | 40 | 160 | 55335-06-3 |

| Contaminant | Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP | | CAS Registry Number |
|---|---|---|---|
| | General solid waste[1] | Restricted solid waste | |
| | CT1 (mg/kg) | CT2 (mg/kg) | |
| Vinyl chloride | 4 | 16 | 75-01-4 |
| Xylenes (total) | 1,000 | 4,000 | 1330-20-7 |

**Notes**

1. Values are the same for general solid waste (putrescible) and general solid waste (non-putrescible).
2. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
3. These limits apply to chromium in the +6 oxidation state only.
4. Analysis for cyanide (amenable) is the established method for assessing potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
5. Endosulfan (CAS Registry Number 115-29-7) means the total of Endosulfan I (CAS Registry Number 959-98-8), Endosulfan II (CAS Registry Number 891-86-1) and Endosulfan sulfate (CAS Registry Number 1031-07-8).
6. The following moderately harmful pesticides are to be included in the total values specified:

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| Name | CAS Registry Number | Name | CAS Registry Number |
| Atrazine | 1912-24-9 | Imidacloprid | 138261-41-3 |
| Azoxystrobin | 131860-33-8 | Indoxacarb | 173584-44-6 |
| Bifenthrin | 82657-04-3 | Malathion (Maldison) | 121-75-5 |
| Brodifacoum | 56073-10-0 | Metalaxyl | 57837-19-1 |
| Carboxin | 5234-68-4 | Metalaxyl-M | 70630-17-0 |
| Copper naphthenate | 1338-02-9 | Methidathion | 950-37-8 |
| Cyfluthrin | 68359-37-5 | 3-Methyl-4-chlorophenol | 59-50-7 |
| Cyhalothrin | 68085-85-8 | Methyl chlorpyrifos | 5598-13-0 |
| Cypermethrin | 52315-07-08 | N-Methyl pyrrolidone | 872-50-4 |
| Deltamethrin | 52918-63-5 | 2-octylthiazol-3-one | 26530-20-1 |
| Dichlofluanid | 1085-98-9 | Oxyfluorfen | 42874-03-3 |
| Dichlorvos | 62-73-7 | Paraquat dichloride | 1910-42-5 |
| Difenoconazole | 119446-68-3 | Parathion methyl | 298-00-0 |
| Dimethoate | 60-51-5 | Permethrin | 52645-53-1 |
| Diquat dibromide | 85-00-7 | Profenofos | 41198-08-7 |
| Emamectin benzoate | 137515-75-4 & 155569-91-8 | Prometryn | 7287-19-6 |
| Ethion | 563-12-2 | Propargite | 2312-35-8 |
| Fenthion | 55-38-9 | Pentachloronitrobenzene (Quintozene) | 82-68-8 |
| Fenitrothion | 122-14-5 | Simazine | 122-34-9 |
| Fipronil | 120068-37-3 | Thiabendazole | 148-79-8 |

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Fluazifop-P-butyl | 79241-46-6 | Thiamethoxam | 153719-23-4 |
| Fludioxonil | 131341-86-1 | Thiodicarb | 59669-26-0 |
| Glyphosate | 1071-83-6 | Thiram | 137-26-8 |

7. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (TPH) (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in *USEPA Method 1664A* (USEPA 2000).
8. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
9. Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/pcbcco1997.pdf.
10. The following polycyclic aromatic hydrocarbons (PAHs) are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

| Polycyclic aromatic hydrocarbons (total) | | | |
|---|---|---|---|
| **PAH name** | **CAS Registry Number** | **PAH name** | **CAS Registry Number** |
| Acenaphthene | 83-32-9 | Chrysene | 218-01-9 |
| Acenaphthylene | 208-96-8 | Dibenzo(a,h)anthracene | 53-70-3 |
| Anthracene | 120-12-7 | Fluoranthene | 206-44-0 |
| Benzo(a)anthracene | 56-55-3 | Fluorene | 86-73-7 |
| Benzo(a)pyrene | 50-32-8 | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| Benzo(b)fluoranthene | 205-99-2 | Naphthalene | 91-20-3 |
| Benzo(ghi)perylene | 191-24-2 | Phenanthrene | 85-01-8 |
| Benzo(k)fluoranthene | 207-08-9 | Pyrene | 129-00-0 |

11. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/scwcco2004.pdf.

    The following scheduled chemicals are to be included in the total values specified:

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Aldrin | 309-00-2 | Heptachlor | 76-44-8 |
| Alpha-BHC | 319-84-6 | Heptachlor epoxide | 1024-57-3 |
| Beta-BHC | 319-85-7 | Hexachlorobenzene | 118-74-1 |
| Gamma-BHC (Lindane) | 58-89-9 | Hexachlorophene | 70-30-4 |
| Delta-BHC | 319-86-8 | Isodrin | 465-73-6 |

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Chlordane | 57-74-9 | Pentachlorobenzene | 608-93-5 |
| DDD | 72-54-8 | Pentachloronitrobenzene | 82-68-8 |
| DDE | 72-55-9 | Pentachlorophenol | 87-86-5 |
| DDT | 50-29-3 | 1,2,4,5-Tetrachlorobenzene | 95-94-3 |
| Dieldrin | 60-57-1 | 2,3,4,6-Tetrachlorophenol | 58-90-2 |
| Endrin | 72-20-8 | 1,2,4-Trichlorobenzene | 120-82-1 |
| Endrin aldehyde | 7421-93-4 | 2,4,5-Trichlorophenoxyacetic acid, salts and esters | 93-76-5 |

## Table 2: TCLP and SCC values for classifying waste by chemical assessment

*For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.*

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| Arsenic | 5.0[2] | 500 | 20 | 2,000 | |
| Benzene | 0.5[2] | 18 | 2 | 72 | 71-43-2 |
| Benzo(a)pyrene[3] | 0.04[4] | 10 | 0.16 | 23 | 50-32-8 |
| Beryllium | 1.0[5] | 100 | 4 | 400 | |
| Cadmium | 1.0[2] | 100 | 4 | 400 | |
| Carbon tetrachloride | 0.5[2] | 18 | 2 | 72 | 56-23-5 |
| Chlorobenzene | 100[2] | 3,600 | 400 | 14,400 | 108-90-7 |
| Chloroform | 6[2] | 216 | 24 | 864 | 67-66-3 |
| Chlorpyrifos | 0.2 | 7.5 | 0.8 | 30 | 2921-88-2 |
| Chromium (VI)[6] | 5[2] | 1,900 | 20 | 7,600 | |
| m-Cresol | 200[2] | 7,200 | 800 | 28,800 | 108-39-4 |
| o-Cresol | 200[2] | 7,200 | 800 | 28,800 | 95-48-7 |
| p-Cresol | 200[2] | 7,200 | 800 | 28,800 | 106-44-5 |
| Cresol (total) | 200[2] | 7,200 | 800 | 28,800 | 1319-77-3 |
| Cyanide (amenable)[7, 8] | 3.5[7] | 300 | 14 | 1,200 | |
| Cyanide (total)[7] | 16[7] | 5,900 | 64 | 23,600 | |
| 2,4-D | 10[2] | 360 | 40 | 1,440 | 94-75-7 |
| 1,2-Dichlorobenzene | 4.3[2] | 155 | 17.2 | 620 | 95-50-1 |
| 1,4-Dichlorobenzene | 7.5[2] | 270 | 30 | 1,080 | 106-46-7 |
| 1,2-Dichloroethane | 0.5[2] | 18 | 2 | 72 | 107-06-2 |
| 1,1-Dichloroethylene | 0.7[2] | 25 | 2.8 | 100 | 75-35-4 |
| Dichloromethane | 8.6[2] | 310 | 34.4 | 1,240 | 75-09-2 |
| 2,4-Dinitrotoluene | 0.13[2] | 4.68 | 0.52 | 18.7 | 121-14-2 |
| Endosulfan[9] | 3 | 108 | 12 | 432 | See below[9] |

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| Ethylbenzene | 30[10] | 1,080 | 120 | 4,320 | 100-41-4 |
| Fluoride | 150[10] | 10,000 | 600 | 40,000 | |
| Fluroxypyr | 2 | 75 | 8 | 300 | 69377-81-7 |
| Lead | 5[2] | 1,500 | 20 | 6,000 | |
| Mercury | 0.2[2] | 50 | 0.8 | 200 | |
| Methyl ethyl ketone | 200[2] | 7,200 | 800 | 28,800 | 78-93-3 |
| Moderately harmful pesticides[11](total) | N/A[12] | 250 | N/A[12] | 1,000 | See below[11] |
| Molybdenum | 5[10] | 1,000 | 20 | 4,000 | |
| Nickel | 2[10] | 1,050 | 8 | 4,200 | |
| Nitrobenzene | 2[2] | 72 | 8 | 288 | 98-95-3 |
| C6–C9 petroleum hydrocarbons[13] | N/A[12] | 650 | N/A[12] | 2,600 | |
| C10–C36 petroleum hydrocarbons[13] | N/A[12] | 10,000 | N/A[12] | 40,000 | |
| Phenol (non-halogenated) | 14.4[14] | 518 | 57.6 | 2,073 | 108-95-2 |
| Picloram | 3 | 110 | 12 | 440 | 1918-02-1 |
| Plasticiser compounds[15] | 1 | 600 | 4 | 2,400 | See below[15] |
| Polychlorinated biphenyls[12] | N/A[12] | < 50 | N/A[12] | < 50 | 1336-36-3 |
| Polycyclic aromatic hydrocarbons (total)[16] | N/A[12] | 200 | N/A[12] | 800 | |
| Scheduled chemicals[17] | N/A[12] | < 50 | N/A[12] | < 50 | See below[17] |
| Selenium | 1[2] | 50 | 4 | 200 | |
| Silver | 5.0[2] | 180 | 20 | 720 | |
| Styrene (vinyl benzene) | 3[10] | 108 | 12 | 432 | 100-42-5 |
| Tebuconazole | 6.4 | 230 | 25.6 | 920 | 107534-96-3 |
| 1,2,3,4-Tetrachlorobenzene | 0.5 | 18 | 2 | 72 | 634-66-2 |

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| 1,1,1,2-Tetrachloroethane | 10[2] | 360 | 40 | 1,440 | 630-20-6 |
| 1,1,2,2-Tetrachloroethane | 1.3[2] | 46.8 | 5.2 | 187.2 | 79-34-5 |
| Tetrachloroethylene | 0.7[2] | 25.2 | 2.8 | 100.8 | 127-18-4 |
| Toluene | 14.4[14] | 518 | 57.6 | 2,073 | 108-88-3 |
| 1,1,1-Trichloroethane | 30[2] | 1,080 | 120 | 4,320 | 71-55-6 |
| 1,1,2-Trichloroethane | 1.2[2] | 43.2 | 4.8 | 172.8 | 79-00-5 |
| Trichloroethylene | 0.5[2] | 18 | 2 | 72 | 79-01-6 |
| 2,4,5-Trichlorophenol | 400[2] | 14,400 | 1,600 | 57,600 | 95-95-4 |
| 2,4,6-Trichlorophenol | 2[2] | 72 | 8 | 288 | 88-06-2 |
| Triclopyr | 2 | 75 | 8 | 300 | 55335-06-3 |
| Vinyl chloride | 0.2[2] | 7.2 | 0.8 | 28.8 | 75-01-4 |
| Xylenes (total) | 50[18] | 1,800 | 200 | 7,200 | 1330-20-7 |

**Notes**

1. Values are the same for general solid waste (putrescible) and general solid waste (non- putrescible).
2. See *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b) for TCLP levels.
3. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
4. Calculated from *Hazardous Waste: Identification and Listing* (USEPA 2012a).
5. Calculated from 'Beryllium' in *The Health Risk Assessment and Management of Contaminated Sites* (DiMarco & Buckett 1996).
6. These limits apply to chromium in the +6 oxidation state only.
7. Taken from the *Land Disposal Restrictions for Newly Identified and Listed Hazardous Wastes and Hazardous Soil: Proposed Rule* (USEPA 1993).
8. Analysis for cyanide (amenable) is the established method used to assess the potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
9. Endosulfan (CAS Registry Number 115-29-7) means the total of endosulfan I (CAS Registry Number 959-98-8), endosulfan II (CAS Registry Number 891-86-1) and endosulfan sulfate (CAS Registry Number 1031-07-8).
10. Calculated from *Australian Drinking Water Guidelines* (NHMRC 2011).
11. The following moderately harmful pesticides are to be included in the total values specified:

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Atrazine | 1912-24-9 | Imidacloprid | 138261-41-3 |
| Azoxystrobin | 131860-33-8 | Indoxacarb | 173584-44-6 |
| Bifenthrin | 82657-04-3 | Malathion (Maldison) | 121-75-5 |
| Brodifacoum | 56073-10-0 | Metalaxyl | 57837-19-1 |
| Carboxin | 5234-68-4 | Metalaxyl-M | 70630-17-0 |
| Copper naphthenate | 1338-02-9 | Methidathion | 950-37-8 |
| Cyfluthrin | 68359-37-5 | 3-Methyl-4-chlorophenol | 59-50-7 |
| Cyhalothrin | 68085-85-8 | Methyl chlorpyrifos | 5598-13-0 |
| Cypermethrin | 52315-07-08 | N-Methyl pyrrolidone | 872-50-4 |
| Deltamethrin | 52918-63-5 | 2-octylthiazol-3-one | 26530-20-1 |
| Dichlofluanid | 1085-98-9 | Oxyfluorfen | 42874-03-3 |
| Dichlorvos | 62-73-7 | Paraquat dichloride | 1910-42-5 |
| Difenoconazole | 119446-68-3 | Parathion methyl | 298-00-0 |
| Dimethoate | 60-51-5 | Permethrin | 52645-53-1 |
| Diquat dibromide | 85-00-7 | Profenofos | 41198-08-7 |
| Emamectin benzoate | 137515-75-4 & 155569-91-8 | Prometryn | 7287-19-6 |
| Ethion | 563-12-2 | Propargite | 2312-35-8 |
| Fenthion | 55-38-9 | Pentachloronitrobenzene (Quintozene) | 82-68-8 |
| Fenitrothion | 122-14-5 | Simazine | 122-34-9 |
| Fipronil | 120068-37-3 | Thiabendazole | 148-79-8 |
| Fluazifop-P-butyl | 79241-46-6 | Thiamethoxam | 153719-23-4 |
| Fludioxonil | 131341-86-1 | Thiodicarb | 59669-26-0 |
| Glyphosate | 1071-83-6 | Thiram | 137-26-8 |

12. No TCLP analysis is required. Moderately harmful pesticides, petroleum hydrocarbons, polychlorinated biphenyls, polycyclic aromatic hydrocarbons and scheduled chemicals are assessed using SCC1 and SCC2.

    Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/pcbcco1997.pdf.

13. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in USEPA *Method 1664A* (USEPA 2000).
14. Proposed level for phenol and toluene in *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b).

15. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
16. The following polycyclic aromatic hydrocarbons are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

| Polycyclic aromatic hydrocarbons (total) | | | |
|---|---|---|---|
| **PAH name** | **CAS Registry Number** | **PAH name** | **CAS Registry Number** |
| Acenaphthene | 83-32-9 | Chrysene | 218-01-9 |
| Acenaphthylene | 208-96-8 | Dibenzo(a,h)anthracene | 53-70-3 |
| Anthracene | 120-12-7 | Fluoranthene | 206-44-0 |
| Benzo(a)anthracene | 56-55-3 | Fluorene | 86-73-7 |
| Benzo(a)pyrene | 50-32-8 | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| Benzo(b)fluoranthene | 205-99-2 | Naphthalene | 91-20-3 |
| Benzo(ghi)perylene | 191-24-2 | Phenanthrene | 85-01-8 |
| Benzo(k)fluoranthene | 207-08-9 | Pyrene | 129-00-0 |

17. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/scwcco2004.pdf.

    The following scheduled chemicals are to be included in the total values specified:

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Aldrin | 309-00-2 | Heptachlor | 76-44-8 |
| Alpha-BHC | 319-84-6 | Heptachlor epoxide | 1024-57-3 |
| Beta-BHC | 319-85-7 | Hexachlorobenzene | 118-74-1 |
| Gamma-BHC (Lindane) | 58-89-9 | Hexachlorophene | 70-30-4 |
| Delta-BHC | 319-86-8 | Isodrin | 465-73-6 |
| Chlordane | 57-74-9 | Pentachlorobenzene | 608-93-5 |
| DDD | 72-54-8 | Pentachloronitrobenzene | 82-68-8 |
| DDE | 72-55-9 | Pentachlorophenol | 87-86-5 |
| DDT | 50-29-3 | 1,2,4,5-Tetrachlorobenzene | 95-94-3 |
| Dieldrin | 60-57-1 | 2,3,4,6-Tetrachlorophenol | 58-90-2 |
| Endrin | 72-20-8 | 1,2,4-Trichlorobenzene | 120-82-1 |
| Endrin aldehyde | 7421-93-4 | 2,4,5-Trichlorophenoxyacetic acid, salts and esters | 93-76-5 |

18. Calculated from *Guidelines for Drinking Water Quality* (WHO 2011).

**Table 3: Summary of criteria for chemical assessment to determine waste classification**

| Waste classification | Criteria[1] for classification by chemical assessment (any of the alternative options given) | Comments |
|---|---|---|
| **General solid waste** | 1. SCC test values ≤ CT1 | TCLP test not required |
| | 2. TCLP test values ≤ TCLP1 and SCC test values ≤ SCC1 | |
| | 3. TCLP test values ≤ TCLP1 and SCC test values > SCC1[2] | Classify as restricted solid or hazardous (as applicable)<br>If immobilisation approval applies, classify in accordance with that approval |
| **Restricted solid waste** | 1. SCC test values ≤ CT2 | TCLP test not required |
| | 2. TCLP1 < TCLP test values ≤ TCLP2 and SCC test values ≤ SCC2 | |
| | 3.TCLP test values ≤ TCLP2 and SCC1 < SCC test values ≤ SCC2 | |
| | 4. TCLP1 < TCLP test values ≤ TCLP2 and SCC test values > SCC2[2] | Classify as hazardous.<br>If immobilisation approval applies, classify in accordance with that approval |
| **Hazardous waste** | 1. TCLP test values > TCLP 2 | |
| | 2. TCLP test values ≤ TCLP2 and SCC test values > SCC2 | Classify as hazardous if no immobilization approval applies |

**Notes**

1. These criteria apply to each toxic and ecotoxic contaminant present in the waste (see Tables 1 and 2).
2. In certain cases the EPA will consider specific conditions, such as segregation of the waste from all other types of waste in a monofill or monocell in order to achieve a greater margin of safety against a possible failure of the immobilisation in the future. Information about the construction and operation of a monofill/monocell is available in the *Draft Environmental Guidelines for Industrial Waste Landfilling* (EPA 1998).

# APPENDIX K

## BOREHOLE LOGS

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# ENVIRONMENTAL LOG: BH01

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH01 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH02

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH02 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH03

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH03 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH04

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH04 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH05

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH05 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH06

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH06 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH07

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH07 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH08

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH08 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH09

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, red | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH09 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH10

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH10 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH11

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:** 0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:** MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH11 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH12

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH12 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH13

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH13 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH14

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, white, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH14 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH15

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, white, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, white | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH15 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH16

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown. white | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, red | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH16 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH17

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, white | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, red | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH17 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

**Disclaimer:** This log is intended for environmental not geotechnical purposes.

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# ENVIRONMENTAL LOG: BH18

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, white | | | No additional comments. | |
| | | 0.4 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, black, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH18 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH19

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 09-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, white | | | No additional comments. | |
| | | 0.4 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, black, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH19 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH20

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, white | | | No additional comments. | |
| | | 0.4 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, black, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH20 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH21

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH21 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

**Disclaimer:** This log is intended for environmental not geotechnical purposes.

SHEET: 1 of 1

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# ENVIRONMENTAL LOG: BH22

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, red | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH22 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH23

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, red | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH23 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH24

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, whitw | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, white | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH24 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH25

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, whitw | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, white | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH25 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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SHEET: 1 of 1

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# ENVIRONMENTAL LOG: BH26

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown, whitw | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown, white | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH26 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH27

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH27 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH28

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH28 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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Aargus

# ENVIRONMENTAL LOG: BH29

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH29 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# ENVIRONMENTAL LOG: BH30

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH30 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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Aargus

# ENVIRONMENTAL LOG: BH31

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH31 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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Aargus

# ENVIRONMENTAL LOG: BH32

**PROJECT NO.:** ES9402/3
**PROJECT NAME:** Detailed Site Investigation
**CLIENT:** Queenwood School for Girls Ltd
**ADDRESS:** 1100 Oxford Falls Road, Oxford Falls NSW

**DRILLING DATE:** 10-10-2024
**METHOD:** Hand Auger
**LOGGED BY:** Mark Kelly

**TOTAL DEPTH:**0.9
**COORDINATES:**
**GROUND ELEV.:**
**CHECKED BY:**MK

| Depth | Graphic | Material Description | Samples No. | Samples Type | Comments / Additional Notes | Well |
|---|---|---|---|---|---|---|
| | | Ground Surface at | | | | |
| 0 | | Sandy Clay, medium grained, brown | | | No additional comments. | |
| | | 0.3 m | | | | |
| | | Sandy CLAY, fine grained, medium plasticity, yellow, brown | | | No additional comments. | |
| | | 0.9 m | | | | |
| | | Test Hole BH32 Terminated at 0.9 m | | | | |
| 1 | | | | | | |

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# APPENDIX L

## FIELD RECORD FORMS / CALIBRATION CERTIFICATES

Aargus

# Site Inspection
# Daily Worksheet Record

Aargus

| | | | |
|---|---|---|---|
| PROJECT NAME: | Detailed Site Investigation | PROJECT NO: | ES9402J3 |
| CLIENT: | Queenwood School for Girls Ltd | DATE: | 10. 10. 2024 |
| SITE ADDRESS: | 1100 Oxford Falls Road, Oxford Falls NSW | | |
| SITE CONTACT: | | PHONE: | |
| AARGUS REPRESENTATIVE: | Harsha Mutha. | | |
| TITLE: | Environmental Engineer | PHONE: | 0457332876 |

**FIELD NOTES:**

| | | | |
|---|---|---|---|
| Start Time | 9:00 am | Finish Time | 5pm |
| Weather | Sunny (18°C) | Rainfall (mm) | 0 in 24 hrs. |
| Wind Direction | N → S | Wind Speed | 10 km/hr. |
| Humidity | 60% | | |
| Odours Present | None | Staining Present | None |

**Environmental and Safety Concerns**

**Actions**

| | | | |
|---|---|---|---|
| Machinery onsite | — | Equipment onsite | Hand Auger. |
| Site Safety Induction | — | Stormwater Control | — |
| Dust Suppression | — | Traffic Control | — |

# Site Inspection
# Daily Worksheet Record

Aargus

| | | | |
|---|---|---|---|
| PROJECT NAME: | Detailed Site Investigation. | PROJECT NO: | ES9402/3 |
| CLIENT: | Queenwood School for Girls Ltd. | DATE: | 09.10.2024 |
| SITE ADDRESS: | 1100 Oxford Falls Road, Oxford falls NSW. | | |
| SITE CONTACT: | | PHONE: | |
| AARGUS REPRESENTATIVE: | Harsha Muttu. | | |
| TITLE: | Environmental Engineer. | PHONE: | 0451332876 |

**FIELD NOTES:**

| | | | |
|---|---|---|---|
| Start Time | 8:00 am | Finish Time | 5pm |
| Weather | Sunny (16°C) | Rainfall (mm) | 0 in 24 hr. |
| Wind Direction | NE-SW | Wind Speed | 12 km/hr. |
| Humidity | 52%. | | |
| Odours Present | None | Staining Present | None. |

**Environmental and Safety Concerns**

**Actions**

| | | | |
|---|---|---|---|
| Machinery onsite | – | Equipment onsite | Hand Auger. |
| Site Safety Induction | – | Stormwater Control | – |
| Dust Suppression | – | Traffic Control | – |

# Aargus Pty Ltd
## PID Certification Report

This PID has been performance checked/calibrated as follows:

- ☑ Calibrate 0.0ppm Reading 0.0 ppm
- ☑ Calibrate 99.3 ppm isobutylene Reading 99.3 ppm
- ☑ Charged
- ☑ Filter check
- ☑ Lamp check

Date: 02/08/2024

Checked by: MK

Signature: [signature]

Please check that the following items are contained within the PID Equipment Register

- ☑ PID carry. case
- ☑ Model 580 EZ PID meter
- ☑ Charger
- ☑ Adapter for charger
- ☑ Calibration tube
- ☑ Sample Probe
- ☑ Water Filter Trap
- ☑ Computer cable connector
- ☑ Floppy disk software

Serial Number: [illegible]

# PID Measurements

Aargus

PID Monitor Description.....

| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
|---|---|---|---|---|---|
| BH1 | <1 | BH16 | <1 | BH31 | <1 |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH2 | <1 | BH17 | <1 | BH32 | <1 |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH3 | <1 | BH18 | <1 | BH33 | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID level |
| BH4 | <1 | BH19 | <1 | BH34 | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH5 | <1 | BH20 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH6 | <1 | BH21 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH7 | <1 | BH22 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH8 | <1 | BH23 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH9 | <1 | BH24 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH10 | <1 | BH25 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH11 | <1 | BH26 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH12 | <1 | BH27 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH13 | <1 | BH28 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH14 | <1 | BH29 | <1 | | |
| Location | PID (ppm) | Location | PID (ppm) | Location | PID (ppm) |
| BH15 | <1 | BH30 | <1 | | |

# APPENDIX M

## LABORATORY TECHNICAL INFORMATION

Aargus

# Recommended Holding Times and Preservations for Soil and Air

## APPLICABLE LOCATIONS

The bottles, preservation and holding times following are for the ALS Environmental operations excluding the ALS Water Resources Group (WRG). The ALS operations covered by this document include;


**Adelaide**
Unit 2, 1 Burma Road
Pooraka, Adelaide, SA 5095
**P** +6- 8-8162-5130
ALSEnviro.Adelaide@alsglobal.com

**Brisbane**
2 Byth Street (Corner Byth and Shand St)
Stafford QLD 4053
**P** +61-7-3243-7222
ALSEnviro.Brisbane@alsglobal.com

**Darwin**
4/16 Charlton Court
Woolner, NT 0820
**P** +61-488-073-271
ALSEnviro.Darwin@alsglobal.com

**Gladstone**
46 Callemondah Drive
Clinton Gladstone, QLD 4680
**P** +61-7-4971-5600
ALSEnviro.Gladstone@alsglobal.com

**Mackay**
78 Harbour Road
Mackay, QLD 4740
**P** +61-7-4944-0177
ALSEnviro.Mackay@alsglobal.com

**Melbourne**
2-4 Westall Road
Springvale VIC 3171
**P** +61-3-8549-9600
ALSEnviro.Melbourne@alsglobal.com

**Mudgee**
29 Sydney Road
Mudgee NSW 2850
**P** +61-2-6372-6735
ALSEnviro.Mudgee@alsglobal.com

**Newcastle**
5 Rosegum Road
Warabrook NSW 2304
**P** +61-2-4968-9433
ALSEnviro.Newcastle@alsglobal.com

**Nowra**
4/13 Geary Place
North Nowra NSW 2541
**P** +61-2-4423-2063
ALSEnviro.Nowra@alsglobal.com

**Perth**
10 Hod Way
Malaga WA 6090
**P** +61-8-9209-7655
ALSEnviro.Perth@alsglobal.com

**Roma**
Lot 4, 73 Beaumont Drive
Roma QLD 4455
**P** +61-7-4622-8978
ALSEnviro.Roma@alsglobal.com

**Sydney**
277-289 Woodpark Road
Smithfield NSW 2164
**P** +61-2-8784-8555
ALSEnviro.Sydney@alsglobal.com

**Townsville**
14-15 Desma Court
Bohle, QLD 4818
**P** +61-7-4796-0600
ALSEnviro.Townsville@alsglobal.com

**Wollongong**
99 Kenny Street
Wollongong NSW 2500
**P** +61-2-4225-3125
ALSEnviro.Wollongong@alsglobal.com


### SOIL AND SEDIMENT SAMPLE CHILLING AND SUBMISSION

Most soils should be chilled to <4˚C or <6˚C (guideline dependent) and transported to the laboratory within 24 hours. Sediments may also benefit from being frozen. ALS recommends placing samples on ice immediately upon sampling for best practice chilling with either repacking into another esky or draining of free water and replacement of ice just prior to dispatch. Chilling overnight in a fridge may also benefit. The post-chilling addition of ice bricks is also recommended where samples are air freighted or dispatched long distance and where couriers will not freight ice.

Please note that where possible samples should be submitted to the laboratory with at least half the recommended holding time remaining and it is preferable to avoid submitting holding time critical tests and full VOC suites late on Fridays without prior arrangement.

## GENERAL NOTES

The following soil testing services are centralized in specialist laboratory locations. These tests require additional separate jars or bags to optimize service delivery and holding time compliance;

- Dioxins, Total S, TOC, TBT (Brisbane),
- PFOS/PFOA/AFFFs, PBDEs, Explosives, Herbicides, Pesticides and Ultra trace Organics (Sydney).
- Sizings, Asbestos and Foreign Materials Testing (Newcastle);
- TRH Speciation (Perth and Melbourne),
- ASS/AMD (Perth and Brisbane).

| KEY | | | |
|---|---|---|---|
| **G** | Glass | **G(T)** | Glass Jar with Teflon Lined Lid |
| **(ZH)** | Zero Headspace required | **PB** | Plastic (Polyethylene) Bag |
| **HVAS** | High Volume Air Sampler Paper | **PTFE** | Polytetrafluoroethylene Filter |
| **PUF** | Polyurethane Filter | **P** | Plastic Container |

# Recommended Holding Times and Preservations for Soil and Air

## SOIL SAMPLES

| Parameter | | ALS Preferred Container | Preservation | Holding Time | Reference |
|---|---|---|---|---|---|
| **INORGANICS, METALS, RADIONUCLIDES, ACID SULFATE SOILS AND PHYSICAL PARAMETERS** | | | | | |
| General Anions and Cations: Chloride, Bromide, Fluoride, Sulfate, CEC & exchangeable Cations | | PB, P or G | Chill, preferably to <6˚C | 28 days [4] | NEPM 2013 |
| Asbestos | | PB (double bagged) | Nil | Indefinite | AS4964-2004 |
| Cyanide | | P or G | Chill, Store in dark | 14 days [4] | NEPM 2013 |
| Electrical conductivity | | PB, P or G | Chill, preferably to <6˚C | 7 days [4] | NEPM 2013 |
| Gross alpha, Gross beta | | PB, P or G | Nil | 180 days | ISO9696, ISO9697, ASTM D7283-06. |
| Hexavalent Chromium (Alkali extract) | | P or G | Chill, Store in dark | 28 days (plus 7 for extract) | NEPM 2013 |
| Metals - General | | PB, P or G | Nil | 6 months | NEPM 2013 |
| Mercury | | P or G | Chill, Store in dark | 28 days | NEPM 2013 |
| Methyl Mercury | Option 1 | G(T) | Chill, Store in dark | 40 days | Horvat et al, 1993 |
| | Option 2 | G(T) | Freeze, Store in dark | 8 months | Horvat et al, 1993 |
| Moisture Content | | PB, P or G | Chill, preferably to <6˚C | 14 days | NEPM 2013 |
| Organic Carbon / TOC | Option 1 | G | Chill, to <6˚C store in dark | 28 days | NEPM 2013 |
| | Option 2 | G | Freeze for sediments | 6 months | NAGD 2009 |
| pH | | PB, P or G | Chill, preferably to <6˚C | 7 days | NEPM 2013 |
| Radium 226, 228 | | PB or G | Nil | 180 days | ISO10703, ASTM D7283-06. |
| SPOCAS, TOS, Chromium Suite | Option 1 | PB (exclude air) | Freeze | Indefinite | AS4969.1-2008 |
| | Option 2 | | Chill, preferably to <6˚C | 24 hours | |
| | Option 3 | | Dry at 80˚C | Indefinite | |
| Sizings and Foreign Material Tests | | PB or G | Nil for sediments | Indefinite | NAGD 2009 |
| Sulfur - total | | PB or G | Chill, preferably to <6˚C | 7 days (6 months once prepared) | NEPM 2013 plus in house |
| Sulfide | | PB or G | Chill, preferably to <6˚C | 28 days (if Total S hold' time met) | NEPM 2013 plus in house |
| **ORGANICS - SEMIVOLATILE COMPOUNDS (SVOCS)** | | | | | |
| General less persistent Semi-Volatile Organic chemicals including:<br>• Carbamate Pesticides<br>• Explosive residues<br>• OC, OP Pesticides & PCBs<br>• Phenoxy acid Herbicides<br>• General Herbicides<br>• TRH/TPH ($C_{10}$-$C_{40}$),<br>• PAHs and Phenols<br>• Phthalate Esters<br>• Pyrethroids (Synthetic)<br>• Semi Volatile Chlorinated Compound<br>• Tributyl Tin (TBT) | | G(T) | Place immediately in the esky and chill to <6˚C using ice. Avoid exposure to light | 14 days (plus holding of extracts typically for up to 40 days) | NEPM 2013 |
| Dioxins & Furans & PCBs | | G(T) | | 1 year in dark, freeze to -10$^0$C | USEPA 1613 |
| PBDEs | | G(T) | | 1 year in dark, freeze to -10$^0$C | USEPA 1614 |
| PFOS & PFOA/ 6:2-FtS / AFFFs | | G(T) | | 6 months | In house - POPs |
| Tributyl Tin, OCPs, OPPs, Phenols, PAHs and PCBs | | G(T) | Freeze within 12 hours of sampling for sediments | 56 days (plus 40 days for extracts) | NAGD 2009 |
| **ORGANICS - VOLATILE COMPOUNDS (VOCS)** | | | | | |
| **VOCs** *except* vinyl chloride, styrene and/or 2-chloroethyl vinyl ether | | G(T) | Rapidly sample, minimize headspace and Chill to <6˚C. Avoid exposure to light | 14 days | NEPM 2013 |
| Vinyl chloride and styrene | | G(T) | | **7 days** ***(Previously 14 days under NEPM 1999)*** | NEPM 2013 |

## AMBIENT AIR, SOIL GAS AND OCCUPATIONAL HYGIENE

### ORGANICS - VOLATILE AND SEMIVOLATILE COMPOUNDS

| Parameter | Media | Preservation | Holding Time | Reference |
|---|---|---|---|---|
| VOCs in whole air samples | Silonite Canister | Nil | 30 days | USEPA TO15r |
| VOCs on Sorbents | Charcoal Tubes/ Passive Badge | Nil | 30 Days | NIOSH 1500/1501/1003 |
| Semi-Volatile Organics including:<br>PAHs<br>Chlorinated Benzenes<br>Chlorinated Phenols | XAD-2 Resin | Protect from light. Store in the dark submit as soon as possible | 7-14 Days | USEPA TO4A/TO10A/TO13A<br>NIOSH 5515/5517 |
| | PTFE/GFF/MCE Filters | | 7 Days | NIOSH 5515/5517 |
| | PUF | | 7 Days | USEPA TO4A/TO13A |
| | HVAS | | 7 Days | USEPA TO4A/TO13A |

**NOTES**

1. Samples for ZHE TCLP or ASLP require a separate additional jar.
2. TCLP and other leaching procedures need to be conducted within the solid sample holding time of the analyte of interest.
3. When a moisture determination is used for dry weight basis reporting, no holding time applies when performed on the same day as the chemical analytes of interest.
4. Holding times for extracted parameters (e.g. Chloride, Bromide, EC, Sulfate, Sulfide & Cyanide) are until extraction. Extract solution holding times also apply.

| Analyte | Method | APHA/USEPA Method |
|---|---|---|
| **$C_6$-$C_9$ – 1999 NEPM Fractions**<br>**TRH (Volatile)/BTEX**<br>**$C_6$-$C_{10}$ – 2010 DRAFT NEPM Fractions** | 10g soil extracted with 20mL methanol, tumbled for 1 hour, and analysed with solvent and instrument check surrogates. Clay samples must be completely disintegrated before an aliquot is taken for analysis. Water direct injection of supplied sample (unopened) and analysis with solvent and instrument check surrogates. Analysis by capillary column Purge and Trap GCMS (mgt LabMark in-house method numbers Method: E029/E016 BTEX, Method: E004 Petroleum Hydrocarbons (TPH), Method: LM-LTM-ORG2010, Method: E005 Moisture Content).<br>Owing to the differential responses of mass spectrometric detectors towards aliphatic and aromatic compounds, it is essential that the standard contain representatives of both groups. This standard should therefore consist of about 40% aromatic and 60% aliphatic target analytes, to be representative of a typical Australian fuel. The aromatic compounds shall comprise the components of BTEX. The aliphatics shall comprise equal proportions of all n-alkanes in the C6 to C10 range. | USEPA Method 8260B |
| **Total Recoverable Hydrocarbons $C_{10}$-$C_{36}$ – 1999 NEPM Fractions**<br>**$>C_{10}$-$C_{40}$ – 2010 DRAFT NEPM Fractions** | Soil - 10g soil and anhydrous sodium sulfate extracted with 20mL dichloromethane/acetone (1:1), and tumbled for a minimum of 1 hour. Clay samples must be completely disintegrated before an aliquot is taken for analysis.<br>Water - One 250ml of water sequentially extracted in a separatory funnel three times with 20mL dichloromethane.<br>Analysis by capillary column GC/FID (mgt LabMark in-house method numbers Method: E004 Petroleum Hydrocarbons (TPH), Method: LM-LTM-ORG2010, Method: E005 Moisture Content) | USEPA Method 8015C |
| **TPH (Silica Gel)** | Exchange an aliquot of sample extract into a suitable solvent for clean-up. For example, a 1:1 dichloromethane/acetone extract should be exchanged into a suitable non-polar solvent to allow for removal of polar substances. To the solvent-exchanged extract add an appropriate weight of silica gel. Mix the extract and silica gel thoroughly (e.g. with vortex mixer) and allow the sorbent to settle before removing a portion of the extract for analysis. (mgt LabMark in-house method numbers Method: LM-LTM-ORG2010, Method: E005 Moisture Content) | USEPA Method 3630C |
| **Phenols/PAH** | Soil - 10g soil, surrogates, mixed with anhydrous sodium sulfate and extracted with 20mL dichloromethane/acetone (1:1), and tumbled for a minimum of 1 hour. Clay samples must be completely disintegrated before an aliquot is | USEPA Method 8270D |

| Analyte | Method | APHA/USEPA Method |
|---|---|---|
| | taken for analysis.<br>Water - 250ml water sample plus surrogates triple extracted with dichloromethane (base and neutrals).<br>Analysis by capillary column GC/MS (mgt LabMark in-house Methods E008.1, E008.2, E015.1, E015.2, E017.1 and E017.2, E016.1, E016.2, E017.1 and E017.2, E007.1, E007.2, E015.1, E015.2, E017.1 and E017.2 Method: E005 Moisture Content). | |
| **Total Metals (As, Cd, Cr, Cu, Ni, Pb, Zn)** | A 0.5gm portion of soil undergoes acidic microwave digestion. Analysis by ICP/MS.(mgt Labmark in-house method E022.2). | USEPA Method 6020A |
| **Total Mercury (Hg)** | 0.5g soil acidic microwave digestion. Analysis by FIMS. (mgt Labmark in-house method E026.2). | USEPA Method 7471B |
| **Filtered Metals (As, Cd, Cr, Cu, Ni, Pb ,Zn)** | Filtered (0.45mm) and acidified in the field prior to analysis. Analysis by ICP/MS. (mgt LabMark in-house method E022.1). | USEPA Method 6020A |
| **Filtered Metals (Al, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mo, Ni)** | Filtered (0.45mm) and acidified in the field prior to analysis. Analysis by ICP/MS. (mgt LabMark in-house method E022.1). | USEPA Method 6020A |
| **Total Metals (Al, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mo, Ni)** | Acidified in the field prior to analysis and digested in the laboratory using aqua regia. Analysis by ICP/MS. (mgt LabMark in-house method E022.1). | USEPA Method 6020A |
| **Filtered Mercury (Hg)** | Filtered, oxidation and final reduction. Analysis by FIMS. (mgt LabMark in-house method E022.1). | USEPA Method 7471B |
| **Conductivity** | Direct measurement using a calibrated meter and electrode. (mgt LabMark in-house method E032 Electrical conductivity (EC)). | APHA Method 2520 B |
| **pH** | Direct measurement using a calibrated meter and electrode. (mgt LabMark in-house method E018 pH). | APHA Method 4500-$H^+$ |
| **Suspended Solids (SS)** | Gravimetric measurement of the residue filtered through a GFC filter. (mgt LabMark in-house method 4100 Total Suspended Solids dried at 103-105°C). | APHA Method 2540 D |
| **Ammonia (as N)** | Alkaline phenol and hypochlorite react with ammonia to form indophenol blue that is proportional to the ammonia concentration that is determined colorimetrically. (mgt LabMark in-house method E036/E050 Ammonia as N). | APHA Method 4500-N |
| **Phosphorus (as P)** | Acid digestion of phosphorus species to form a molybdophosphoric acid complex that is reduced to molybdenum blue which is proportional to the phosphorus concentration that is determined colorimetrically. (mgt LabMark in-house method E038 /E052 Total Phosphorus (as P)). | APHA Method 4500-P |

# SOLIDS

| Analyte | LOR (mg/kg) | Method |
|---|---|---|
| Compositing (per discrete sample) | - | In-house |
| Solids pulverise only | - | In-house |
| Solids crush/pulverise | - | In-house |
| Concrete core cutting (per section) | - | In-house |
| Samples received for holding | - | - |
| Extended storage per month | - | - |
| Trip spike (soil) supply per jar | - | - |
| Trip blank (soil) supply per jar | - | - |
| Rinsate water supply per L | - | - |
| Moisture# | 0.1% | In-house |
| Soil/water leach (1:5) | - | In-house |
| TCLP extraction | - | USEPA 1311 |
| ASLP – metals & SVOC | - | AS 4439.3 |
| TCLP/ASLP – VOC | - | AS 4439.3 (ZHE) |
| Paint film (dried) digest ^ | - | In-house |
| Field Tests | | |
| pHF ^ | 0.1 pH unit | 23AF |
| pHFox ^ | 0.1 pH unit | 23BF |
| pHF and pHFox ^ | 0.1 pH unit | 23AF/BF |
| | | |
| **SPOCAS Test Suite** | | |
| TPA – Titratable Potential Acidity | 5 mol H+/tonne | 23G |
| TAA - Titratable Actual Acidity | 5 mol H+/tonne | 23F |
| pHox/pHKCl | 0.1 pH unit | 23A - 23B |
| SP/SKCl/SPOS | 0.005% | 23C - 23E |
| Ca & Mg extractables | 0.005% | 23S - 23X |
| Additional ANCE (If pHOX >6.5) | 5 mol H+/tonne | 23Q |
| Additional SHCl (If pHKCl <4.5 to calc SNAS) | 0.01% | 20B |
| | | |
| **Chromium Test Suite** | | |
| pHKCl | 0.1 pH unit | 23A |
| TAA | 5 mol H+/tonne | 23F |
| SCR | 0.005% | 22A |
| Additional SHCl / SKCl (If pHKCl <4.5 to calc SNAS) | 0.005% | 20B & 23C |
| Additional ANCBT ^(If pHOX >6.5) | 5 mol H+/tonne | 23Q |
| | | |
| **Acid Mine Drainage** | | |
| Net Acid Generation | | |
| pHox | 0.1 pH unit | |
| | | |
| **Net Acid Producing Potential ^** | | Calculation |
| Aged pH (1:2) ^ | 0.1 pH unit | In-house |
| Aged EC (1:2) ^ | 0.1 pH unit | In-house |
| Sulphate (SHCl) ^ | 0.005% | |
| Total Sulphur ^ | 0.005% | |
| TOS (Tot S - SO4)^ | 0.005% | Calculation |
| ANC ^ | 0.06% CaCO3 | 23Q |
| Anions (F, Cl, NO2, Br, NO3, PO4, SO4) | Refer to the individual analytes | |
| Bromide (water soluble) | 1 | APHA 4110 |

# No charge if analysis requested that requries results to be reported on a dry weight basis

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# SOLIDS continued

| Analyte | LOR (mg/kg) | Method |
|---|---|---|
| Bulk Density | g/mL | In-house |
| Carbon (total) | 0.05% | Leco |
| Chloride (water soluble) | 5 | APHA 4110 |
| Cyanide (total) | 0.5 | APHA 4500-CN |
| Cyanide (weak acid dissociable) | 0.5 | APHA 4500-CN |
| Cyanide (free) | 0.5 | APHA 4500-CN |
| Cyanide (amenable to chlorination) | 0.5 | APHA 4500-CN |
| Electrical conductivity | 5 µS/cm | APHA 2510B mod |
| Fluoride (total) | 50 | In-house |
| Fluoride (water soluble) | 0.5 | APHA 4400 F-C |
| Modified Emerson Class | - | External |
| Oil and Grease | 50 | APHA 5520B |
| Organic Matter (Calculated from TOC) | 0.05% | Discrete Analyser |
| pH | 0.1 pH unit | APHA 4500-H mod |
| pH (CaCl2) | 0.1 pH unit | APHA 4500-H mod |
| pH/Electrical Conductivity | Refer to individual analytes | Refer to individual analytes |
| Phenolics (total) | 0.1 | APHA 5530 |
| Redox potential (Eh or ORP) | 1 mv | In-house |
| Resistivity | 2000 ohm.m | APHA 2510B mod |
| Salinity (calculated from EC) | 10 | APHA 2520 mod |
| Sieve fraction | Various | In-house |
| Sieve analysis | Various | In-house |
| Sieve sedimentation (hydrometer) | Various | In-house |
| Soil texture ^ | - | In-House |
| Sulphate (water soluble) | 5 | APHA 4110 mod |
| Sulphate (acid extractable) | 0.005% | APHA 3120 mod |
| Sulphur (total) ^ | 0.005% | In-house |
| Total organic carbon (TOC) | 0.05% | Discrete Analyser |
| Total organic carbon (TOC) | 0.01% | Leco |
| Whole Rock Analysis | - | In-house |
| Ammonia (water soluble) ^ | 0.5 | APHA 4500-NH3 mod |
| Nitrate (water soluble) | 0.5 | APHA 4110/4500-NH3 |
| Nitrite (water soluble) | 0.5 | APHA 4110 |
| Nitrogen - oxidised | 0.5 | APHA 4110 |
| Total kjeldahl nitrogen (TKN) | 5 | APHA 4500-Norg B mod |
| Phosphate (water soluble) | 1 | APHA 4110/4500-P |
| Phosphorus sorption ^ | 1 | In-house |
| Phosphorous retention index (PRI) ^ | 1%/5mg/kg | In-house |
| Available phosphorous (Colwell) | 1 | Rayment & Higginson |
| Phosphorous absorption isotherm ^ | 0.02 | In-house |
| Phosphorus (total) | 5 | APHA 4500-P B/E mod |

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# SOLIDS continued

| Analyte | LOR (mg/kg) | Method |
|---|---|---|
| Aluminium (Al) | Detections vary between testing facilites. Limits are in line with current regulations and requirements. | USEPA 6010B / USEPA 6020A |
| Antimony (Sb) | | |
| Arsenic (As) | | |
| Barium (Ba) | | |
| Beryllium (Be) | | |
| Bismuth (Bi) | | |
| Boron (B) | | |
| Cadmium (Cd) | | |
| Calcium (Ca) | | |
| Chromium (Cr) | | |
| Cobalt (Co) | | |
| Copper (Cu) | | |
| Iron (Fe) | | |
| Lead (Pb) | | |
| Lithium (Li) | | |
| Magnesium (Mg) | | |
| Manganese (Mn) | | |
| Molybdenum (Mo) | | |
| Nickel (Ni) | | |
| Potassium (K) | | |
| Phosphorus (P) | | |
| Selenium (Se) | | |
| Silver (Ag) | | |
| Sodium (Na) | | |
| Strontium (Sr) | | |
| Sulphur (S) ^ | | |
| Thallium (Tl) | | |
| Tin (Sn) | | |
| Titanium (Ti) | | |
| Vanadium (V) | | |
| Zinc (Zn) | | |
| Full ICP-OES Scan | Various | USEPA 6010B / USEPA 6020A |
| Hexavalent chromium (Cr6+) | 1 | APHA 3500-Cr |
| Mercury (Hg) | 0.5 | USEPA 7471A |
| Benzene, toluene, ethyl benzene, xylenes (BTEX) | Refer to Data Sheet 1 | USEPA 8260 |

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# SOLIDS continued

| Analyte | LOR (mg/kg) | Method |
|---|---|---|
| BTEX (low level) | Refer to Data Sheet 1 | USEPA 8260 |
| Total Recoverable Hydrocarbons (C6-C9) | Refer to Data Sheet 1 | USEPA 8260 mod |
| Total Recoverable Hydrocarbons (C10-C36) | Refer to Data Sheet 1 | USEPA 8015 |
| Total Recoverable Hydrocarbons (C6-C36) | Refer to Data Sheet 1 | USEPA 8015 |
| BTEX + TRH (C6-C9) | Refer to individual analytes | |
| TRH + BTEX | Refer to individual analytes | |
| TPH (includes silica gel clean-up) | Refer to Data Sheet 1 | NEPM USEPA 8015 |
| Product ID by GC-FID | Not applicable | GC/FID |
| TRH aliphatic/aromatic speciation (NEPM requirements) | Refer to Data Sheet 1 | MA DEP 1994 GC/FID |
| Trihalomethanes (THM) | Refer to Data Sheet 7 | USEPA 8260B |
| Monocyclic aromatic hydrocarbons (14 MAHs) | Refer to Data Sheet 7 | USEPA 8260B |
| Volatile halogenated hydrocarbons (41 VHCs) | Refer to Data Sheet 7 | USEPA 8260B |
| VOC screen (60 analytes) | Refer to Data Sheet 7 | USEPA 8260B |
| VOC scan for ID of unknowns (10 VOCs max) plus VOC target screen ^ | - | USEPA 8260B |
| Herbicides - phenoxy acid | Refer to Data Sheet 3 | USEPA 8151A |
| Herbicides - phenoxy acid (low level) | Refer to Data Sheet 3 | USEPA 8151A |
| Organochlorine pesticides (OCP) | Refer to Data Sheet 5A | USEPA 8080/8081/ 8270 |
| Organochlorine pesticides (low level) | Refer to Data Sheet 5A | USEPA 8080/8081/ 8270 |
| For general organics packages refer to the Soil Package Calculator | Refer to Data Sheet 5A | USEPA 8080/8081/ 8270 |
| Organophosphate pesticides (OPP) | Refer to Data Sheet 5B | USEPA 8080/8081/ 8270 |
| Organophosphate pesticides (low level) | Refer to Data Sheet 5B | USEPA 8080/8081/ 8270 |
| OPP (extended list) | Refer to Data Sheet 5B | USEPA 8080/8081/ 8270 |
| Polychlorinated biphenyls (PCB, Arochlors) | Refer to Data Sheet 6 | USEPA 8080/8081/ 8270 |
| PCB congeners (low level) | Refer to Data Sheet 6 | USEPA 8080/8081/ 8270 |
| OC/OP pesticides | Refer to Data Sheet 5A/B | USEPA 8080/8081/ 8270 |
| OC/OP pesticides/PCB congeners | Refer to Data Sheets 5/6 | USEPA 8080/8081/ 8270 |
| OC/OP/PCB congeners (all low level) | Refer to Data Sheets 5/6 | USEPA 8080/8081/ 8270 |
| PAHs | Refer to Data Sheet 2 | USEPA 8270D |
| PAHs (low level analytes) | Refer to Data Sheet 2 | USEPA 8270D |
| Phenols - speciated (standard list) | Refer to Data Sheet 4 | USEPA 8041 |
| Phenols - speciated plus acid herbicides | Refer to Data Sheets 3/4 | USEAP 8041/8151 |
| Phenols - speciated (low level) | Refer to Data Sheet 4 | USEPA 8041 |
| Phenols - speciated (extended list) | Refer to Data Sheet 4 | USEPA 8041 |
| SVOC 8270 Scan | Refer to Data Sheet 13 | USEPA 8270D |
| SVOCs (PAH, OC, OP, PCB package) | Refer to Data Sheet 9 | USEPA 8270D |
| SVOC SGS Extended Organics Scan (162 Analytes) | Refer to Data Sheet 9 | USEPA 8270D |
| SVOC scan for ID of unknowns (10 SVOCs max) plus SVOC target screen ^ | 1 | USEPA 8270D |
| Herbicides - triazines | Refer to Data Sheet 3 | USEPA 8270D mod |
| Chlorinated benzenes & naphthalenes | Refer to Data Sheet 9 | USEPA 8270D |
| Carbamates | Refer to Data Sheet 9 | USEPA 8270D |
| Phthalates | Refer to Data Sheet 9 | USEPA 8270D |
| Synthetic pyrethroids | Refer to Data Sheet 9 | USEPA 8270D mod |
| **Dioxins/Furans** | | |
| Dioxins | Refer to Data Sheet 13 | HR-GC-MS |
| Dioxins (Fast) | | |

^ Not covered by the terms of our NATA accreditation

# AQUEOUS

| Analyte | LOR (mg/L) | Method Reference |
|---|---|---|
| Filtration of samples (per filter) | - | APHA 3000 |
| Absorbance at 254nm | 0 abs units | Christian 1986 |
| Acidity | 5 mg CaCO3/L | APHA 2310B |
| Adsorbable organic halides (AOX) | 2 µg/L | External |
| Alkalinity - total | 5 mg CaCO3/L | APHA 2320B |
| Alkalinity - hydroxide | 5 mg CaCO3/L | APHA 2320B |
| Alkalinity - carbonate | 5 mg CaCO3/L | APHA 2320B |
| Alkalinity - bicarbonate | 5 mg CaCO3/L | APHA 2320B |
| Biological oxygen demand (BOD) | 2 | APHA 5210B |
| Carbohydrate as sugar | 5 | In-house |
| Chemical oxygen demand (COD) | 5 | APHA |
| Chlorine demand | - | - |
| Chlorine - total | 0.1 | APHA 4500-Cl2 |
| Chlorine - free | 0.1 | APHA 4500-Cl2 |
| Chlorophyll a,b,c / pheophytin | 0.5 µg/L | APHA 10200H |
| Colour - true | 5 PCU | APHA 2120 A/B |
| Electrical Conductivity | 1 µS/cm | APHA 2510B |
| Cyanide - total | 0.005 | APHA 4500-CN C/E |
| Cyanide - amenable to chlorination | 0.005 | APHA 4500-CN G |
| Cyanide - weak acid dissociable | 0.005 | APHA 4500-CN C/I |
| Cyanide - free | 0.5 | APHA 4500-CN B/E |
| Cyanate | 0.5 | APHA 4500-CN L |
| Dissolved oxygen | 0.1 | APHA4 500-O G |
| Ferrous iron | 0.1 | APHA 3500-Fe B |
| Formaldehyde | 0.2 | In-house |
| Free CO2 ^ | 5 | APHA 4500-CO2 |
| Hardness - total | 5 mg CaCO3/L | APHA 2340B |
| Chromium - hexavalent (Cr6+) | 0.05 | APHA 3500-Cr B |
| Hydrogen sulphide - free | 0.05 | APHA 4500-S2- C/F |
| MBAS (refer to Surfactants - MBAS) | - | - |
| Microtox | Various | External |
| Odour | - | In-house |
| Oil and grease | 1 | APHA 5520B |
| Oil and grease - hydrocarbons | 1 | APHA 5520F |
| pH | 0.1 pH units | APHA 4500H |
| pH/Electrical Conductivity | Refer to the individual analytes | |
| Phenolics - total | 0.05 | APHA 5530 |
| Solids - total | 10 | APHA 2540B |
| Solids - total suspended (TSS, 103°C) | 5 | APHA 2540D |
| Solids - total dissolved (TDS, 180°C) | 10 | APHA 2540C |
| Solids - volatile (550°C) | 10 | APHA 2540E |
| Solids - settleable ^ | 10 | APHA 2540F |
| Sulphide | 0.05 | APHA 4500-S2- C/F |
| Sulphite | 2 | APHA 4500-SO32- B |
| Sulphur - total | 0.5 | APHA 3500 |
| Surfactants - anionic (MBAS) | 0.1 | APHA 5540C |
| Thiocyanate | 1 | APHA 4500-CN M |
| Thiocyanate (low level) ^ | 0.05 | APHA 4500-CN M |
| Thiosulfate | 1 | APHA 4110 |
| Total organic carbon (TOC) | 1 | APHA 5310B |

^ Not covered by the terms of our NATA accreditation

# AQUEOUS continued

| Analyte | LOR (mg/L) | Method Reference |
|---|---|---|
| Dissolved organic carbon (DOC/FOC) | 1 | APHA 5310B |
| Total inorganic carbon (TIC) | 1 | APHA 5310B |
| Total carbon | 1 | APHA 5310B |
| Turbidity | 0.5 NTU | APHA 2130B |
| Redox potential (Eh) | 1 mV | APHA 2580B |
| Silica - reactive | 0.05 | APHA 4500-Si F |
| Sodium absorption ratio (SAR) | 0.1 | APHA 3500C-Ca,Mg,Na |
| Anions by IC (F, Cl, NO2, Br, NO3, PO4, SO4) | Refer to the individual analytes | |
| Bromide | 0.2 | APHA 4110 |
| Chloride | 1 | APHA 4110 |
| Fluoride by IC | 0.1 | APHA 4110 |
| Fluoride by ISE | 0.1 | APHA 4500-F C |
| Iodide | 0.01 | APHA 4110 mod |
| Nitrate by IC | 0.2 | APHA 4110 |
| Nitrite by IC | 0.1 | APHA 4110 |
| Sulphate | 1 | APHA 4110 |
| Ammonia | 0.05 | APHA 4500-NH3 B/C |
| Ammonia (low level) | 0.005 | APHA 4500-NH3 G |
| Nitrite | 0.05 | APHA 4110/4500-NO2 B |
| Nitrite (low level) | 0.005 | APHA 4500-NO2 B |
| Nitrogen - organic (TKN - NH3-N) | 0.05 | APHA 4500-Norg/NH3 |
| Nitrogen - total Kjeldahl (TKN) | 0.05 | APHA 4500-Norg |
| Nitrogen - total oxidised (TON) | 0.05 | APHA 4500-NO3/NO2 |
| Nitrogen - total oxidised (TON, low level) | 0.005 | APHA 4500-NO3/NO2 |
| Nitrogen - total (TKN + TON) | 0.05 | APHA 4500-N |
| Nitrogen - total persulphate (TPN) | 0.05 | APHA 4500-N |
| Phosphorus - filterable reactive | 0.05 | APHA 4500-P |
| Phosphorus - filterable reactive (low level) | 0.005 | APHA 4500-P F |
| Phosphorus - total | 0.05 | APHA 4500-P B/ F |
| **Forms of Nitrogen** | | |
| Ammonia | Refer to the individual analytes | |
| Total Kjeldahl nitrogen | | |
| Nitrate | | |
| Nitrite | | |
| Total nitrogen | | |
| **Forms of Phosphorus** | | |
| Orthophosphate (FRP) | Refer to the individual analytes | |
| Total phosphorus | | |
| Total persulphate nitrogen | 0.05 | APHA 4500-Norg B/4500-P F |

^ Not covered by the terms of our NATA accreditation

# AQUEOUS continued

| Analyte | LOR (µg/L) | LOR (mg/L) | | Method Reference |
|---|---|---|---|---|
| | ICP-MS | ICP-OES | AAS/GF-AAS | |
| Aluminium (Al) | Detections vary between testing facilites. Limits are in line with current regulations and requirements. | | | USEPA 6010B / USEPA 6020A/ APHA |
| Antimony (Sb) | | | | |
| Arsenic (As) | | | | |
| Barium (Ba) | | | | |
| Beryllium (Be) | | | | |
| Bismuth (Bi) | | | | |
| Boron (B) | | | | |
| Cadmium (Cd) | | | | |
| Calcium (Ca) | | | | |
| Chromium (Cr) | | | | |
| Cobalt (Co) | | | | |
| Copper (Cu) | | | | |
| Iron (Fe) | | | | |
| Lanthanum (La) | | | | |
| Lead (Pb) | | | | |
| Lithium (Li) | | | | |
| Magnesium (Mg) | | | | |
| Manganese (Mn) | | | | |
| Molybdenum (Mo) | | | | |
| Nickel (Ni) | | | | |
| Potassium (K) | | | | |
| Phosphorus (P) | | | | |
| Selenium (Se) | | | | |
| Silicon (Si) | | | | |
| Silver (Ag) | | | | |
| Sodium (Na) | | | | |
| Strontium (Sr) | | | | |
| Sulphur (S) | | | | |
| Tellurium (Te) | | | | |
| Thallium (Tl) | | | | |
| Thorium (Th) | | | | |
| Tin (Sn) | | | | |
| Titanium (Ti) | | | | |
| Uranium (U) | | | | |
| Vanadium (V) | | | | |
| Ytterbium (Y) | | | | |
| Zinc (Zn) | | | | |
| ICP-MS scan | | | | |

^ Not covered by the terms of our NATA accreditation

AUSTRALIA - ENVIRONMENTAL SERVICES - GUIDELINE

# FIELD SAMPLING GUIDE FOR CONTAINERS AND HOLDING TIME BY AUSTRALIAN STANDARD (WATERS) AND NEPM (SOILS)

Approved: P. Bamford

| | Water and Wastewater | | | | | Soil and Sludge | |
|---|---|---|---|---|---|---|---|
| Analysis | Container Type | Colour | Volume | Preservation | Hold Time | Container (250mL routine) | Hold Time |
| Acid Sulphate Soils | N/A | Green | N/A | N/A | N/A | HDPE bag | 24 h @ <4 °C<br>90 days frozen |
| Acidity/ Alkalinity ($HCO_3$, $CO_3$) | P,G | Green | 125 mL | Cool 4°C Exclude Air | 24 hours | P,G | N/A |
| Algae | P | Blue | 250/500mL | Cool 4 °C, Exclude light | 48 hours | N/A | N/A |
| Asbestos Identification | P | Blank | 125 mL | N/A | N/A | HDPE bag | N/A |
| Bromide | P, G amber | Green | 125mL | Cool 4 °C, Exclude light | 28 days | P, G | 7 days |
| BOD | P,G | Green | 500mL/1 L | Cool 4°C, Exclude Air | 24 hours (48h, USEPA) | N/A** | N/A** |
| Boron | P,G | Green | 125 mL | None | 28 days | N/A** | N/A** |
| Carbon Dioxide | P,G | Green | 125mL | Cool 4 °C, Exclude Air | 24 hours | N/A | N/A |
| Chloride | P,G | Green | 125 mL | Cool 4°C | 28 days | P,G | 7 days |
| Chlorine; Total, Free | P,G | Green | 500 mL | None | immediate | N/A | N/A |
| Chloroacetic Acid (HAA) | G-TLS | White | 2 x 40mL | Cool 4°C, Sodium thiosulphate or Sulphite | 7 days | N/A | N/A |
| Chlorophyll; a, b, c | P,G amber | Green | 1000 mL | Cool 4°C, Exclude light Filter on site and freeze | 24 hours<br>(30 days frozen on filter) | N/A | N/A |
| Chromium VI (Hexavalent) | P,G | Green | 125 mL | Cool 4°C | 24 hours | P,G USEPA1636 | 28 days** |
| COD | P,G | Orange | 125/250mL | Cool 4°C $H_2SO_4$ to pH< 2 | 7 days | N/A** | N/A** |
| Colour | P,G | Green | 125 mL | Cool 4°C | 48 hours | N/A | N/A |
| Conductivity | P,G | Green | 125 mL | Cool 4°C | 28 days | P,G | 7 days |
| Cyanide; Free, Total, WAD | P black, G amber | Purple | 500 mL | Cool 4°C NaOH to pH > 12, Exclude light | 24 hours (14 d, APHA) | P,G | 7 days |
| Dust (Deposited Solids) | G | White | 2.5/4 Litre | $CuSO_4$ | 28 days | N/A | N/A |
| Fluoride | P | Green | 125 mL | Cool 4°C | 28 days | P | 7 days |
| Glyphosate | G amber | Green | 125mL | Cool 4°C | 7 days | G | 14 days |
| Iodide | P, G | Green | 125 mL | Cool 4°C | 28 days | N/A** | N/A** |
| Iron, Ferrous | P | Brown | 125mL | Cool < 4°C/HCl to pH<2 exclude Air | 24 hours (7 days ISO 5667-3) | N/A** | N/A** |
| Mercury (Hg) ## APHA states only $HNO_3$ is required for metals | G (AW) | White | 125 mL | Cool 4°C<br>$K_2Cr_2O_7$ / $HNO_3$ to pH < 2 | 28 days | P,G | 28 days |
| Metals ## excluding Cr (VI) | P (AW) | Red | 125 mL | Total: Cool 4°C exclude air<br>Soluble: Field Filter Cool 4°C exclude air - then Lab $HNO_3$ to pH<2 | 6 months | P,G | 6 months |
| Methane (dissolved gases) | G-TLS | Brown | 2x40 mL | Cool 4°C, HCl to pH<2, exclude air | 7 days | N/A | N/A |
| Microbiologicals (eg. E.coli) | G, PET | Blue | 600mL | Cool 4°C, sterile | 24 hours | P | 24 hours |
| Nutrients ($NO_x$-N, $NO_2$-N, $NH_3$-N, SRP) | P,G | Green | 125/250mL | Cool 4°C | 48 hours (28 days frozen) | P,G | 7 days |
| Nutrients (TKN, TP) | P,G | Green | 125/250mL | Cool 4°C | 48 hours (28 days frozen) | P,G | 7 days |
| Oil and Grease (Total) | G | Orange | 500mL/1 L | Cool 4° C, $H_2SO_4$ to pH< 2 | 28 days | G | 28 days |
| Organometallics (TBT, methyl Hg) | G-TLC | Green | 500 mL | Cool 4° C | 28 days | G-TLC | 14 days |
| Oxygen, Dissolved | G | Green | 125mL | Exclude Air | Immediate (8h indicative) | N/A | N/A |
| pH | P,G | Green | 50 mL | Cool 4° C, exclude air | 6 hours (indicative 24h) | P,G | 7 days |
| Phenol, Total (colourimetric) | G | Orange | 500mL | Cool 4°C, $H_2SO_4$ to pH< 2 | 21 days | G-TLC | 14 days |
| Silica, Reactive | P | Green | 125 mL | Cool 4°C | 28 days | N/A | N/A |
| Solids; Total | P,G | Green | 500mL | Cool 4°C | 7 days | N/A | N/A |
| Solids; Volatile | P,G | Green | 500mL | Cool 4°C | 7 days | N/A | N/A |
| Sulfate | P,G | Green | 200 mL | Cool 4°C | 28 days | P,G | 7 days |
| Sulfide | P,G | Yellow | 500mL/1L | Cool 4°C Zn acetate and NaOH to pH>9 | 7 days | P,G | 7 days |
| Sulfite | P,G | Green | 200 mL | None | Immediate | N/A | N/A |
| Surfactants-MBAS | P,G | Green | 250 mL | Cool 4°C | 48 hours | N/A | N/A |
| SVOCs Routine OC, OP, PCB, TRH, PAH , spec. phenols, herbicides, 8270 etc | G-TLC | Green | 100mL | Cool 4° C | 7 days | G-TLC | 14 days |
| SVOCs Low Level OC, OP, PCB, TRH, PAH, spec. phenols, herbicides | G-TLC | Green | 2 x 1 L | Cool 4° C | 7 days | G-TLC | 14 days |
| TOC | G | White | 125 mL | Cool 4°C | 7 days | G | 7 days |
| Total Dissolved Solids | P,G | Green | 500mL | Cool 4°C | 24hours (APHA 7 days) | N/A | N/A |
| Total Suspended Solids | P,G | Green | 500 mL | Cool 4°C | 24 hours (APHA 7 days) | N/A | N/A |
| Turbidity | P,G | Green | 200 mL | Cool 4°C | 24 hours | N/A | N/A |
| VOCs / BTEX | G-TLS | White | 2x40 mL | Cool 4°C, Sodium Thiosulphate, exclude air | 7 days (USEPA 14 days) | G-TLC | 14 days |

## For dissolved metals, samples should be filtered through 0.45 µm immediately on site, prior to laboratory preservation.

** There is no documented value for this parameter. SGS analyse within 7 days; scientific references may exist but are contradictory or not explicit.

P&T - Purge and Trap 40 mL screw top, P = High Density Polyethylene, G = Glass, TLS = Teflon Lined Septum, TLC = Teflon Lined Cap, AW=Acid Washed. SGS Environmental is not responsible for the accuracy of the information contained in this table. Users are encouraged to refer to the current regulations from which this information is obtained. The hold time listed is the suggested time that samples may be held before analysis and still be considered valid. Sources: AS/NZS 5667.1:1998, ISO 5667-3-2003, *Standard Methods for the Examination of Water and Wastewater,* 21st Edition, 2007, *USEPA SW 846,* 3rd Edition 1986 plus updates. NEPM 2011 DRAFT schB3 table 1 guidelines for soil. Holding times may be met or extended, after laboratory extraction, for some analytes.


**Environmental Services, SGS Australia Pty Ltd:**

| Alexandria NSW | Cairns QLD | Coburg VIC | Newburn WA | Rocklea QLD | Shepparton VIC | Traralgon VIC |
|---|---|---|---|---|---|---|
| 02 8594 0400 | 07 4035 5111 | 03 9350 4800 | 08 9373 3500 | 07 3274 7900 | 03 5821 1708 | 03 5172 1555 |

## General Water Sampling Guide

- Fill all sample bottles provided for each sample/sampling location.
- Where a cooler and ice bricks have been provided, please ensure the ice bricks have been frozen prior to sampling such that samples are cooled on collection and during transport to the laboratory.
- Some bottles will contain preservatives – do not wash out or overflow bottle while filling.
- Ensure sample labels are legibly completed and Chain of Custody form completed to include all information relevant to the sampling event.
- Where filtering equipment (syringes and disposable filter cartridges) has been provided to sample for soluble metals or nutrients for example, fill syringe with sample, affix filter cartridge, then discharge the sample through the cartridge directly into the sample bottle.

## Sample Types

Trade wastes

Trade wastes should only be sampled when there is a flow and a grab sample is suitable in most instances. An auto-sampler may be used for a 24 hour composite. Preservation or cooling may be required and should be arranged prior to setting the auto-sampler up. Most auto-samplers have provision for the addition of ice or frozen cooler blocks.

Groundwaters

Samples may be taken by two methods:

a) Pumping - Use a suction pump for shallow bores and pump out at least two bore volumes (preferably three if the bore replenishes quickly) to clear stagnant water. For deep bores a submersible type pump is required.

b) Bailing - This method is used for small diameter bores (<6 cm) however stagnant water may not be completely removed from the bore. A teflon bailer is suited for sampling volatile organic compounds.

Surface waters

Well mixed waters may be sampled using a bottle placed upside down in the water at a depth of 10-15 cm by the sampler wearing polyethylene gloves. The bottle is inverted to fill, then capped. Difficult locations may be sampled with a bucket fixed to a long pole.

Tapwaters

Collect samples at faucets which are free of contaminating devices such as screens, hoses and purification devices. Thoroughly flush the spigot for thirty to sixty seconds to clear the service line.

## Filling Bottles

Multiple bottles

When multiple sample bottles are required to be filled to ensure correct preservation, a 4L beaker or bucket of well mixed sample is used to fill the individual bottles. Exceptions to this procedure are detailed below. Non preserved containers should be rinsed with sample and filled completely so as to exclude air. Pre-dosed containers should be filled to the neck. Do *not* empty out the preservative.

Volatiles

When sampling for volatiles, fill two 40mL glass sample vials completely (per sample) leaving no headspace from a grab sample. Seal the bottle immediately with a teflon lined lid.

Microbiology

Wear new sterile gloves hold the lid in the same hand as the sterile bottle. Fill the bottle to the neck and avoid touching the inside of the lid or thread of the bottle with the hands. Do not place the lid down on any surface. Do not rinse the container with the sample. Note in the sampling record if the water body is chlorinated. If sampling tap water it may be necessary to remove the aeration screen/device. Disinfection of the tap may be performed by swabbing the tap with a 10% solution of sodium hypochlorite, or, flame the spout using a portable butane burner, before flushing the tap for thirty to sixty seconds. Sample directly into the sterile container.

Other organics

Mix the sample well but avoid unnecessary disturbance and avoid contact with any equipment made from plastics apart from teflon. Sample into a 4L glass beaker and then fill amber glass bottles with the collected sample. If any items of sampling equipment are contaminated by petroleum products they can be cleaned with a 10% solution of Decon 90 followed by thorough rinsing with deionised water.

Has anything changed from your original sampling plan?

Your Chain of Custody is a legal document which tells us what you want tested. If you have a pre-printed COC and sample points were not collected, record this. If you want to add or change testing, ensure that your COC accurately reflects each & every sample you are submitting to the laboratory.

Make sure your contact details are with the paperwork in your esky. If we have any questions regarding your samples, the answer is often urgently required to ensure your testing starts within its holding times.

If you have any questions please do not hesitate to contact us.

# APPENDIX N

## LABORATORY CERTIFICATES



# AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112


Our ref : ASET121874 / 125054 / 1 - 36
Your ref : ES9402/3 – DSI - Oxford Falls
**NATA Accreditation No: 14484**

17 October 2024

Aargus Engineering Trust Pty Ltd
46 Smithfield Road
Smithfield NSW 2164

**Attn: Mr Mark Kelly**

**Accredited for compliance with ISO/IEC 17025 - Testing.**

Dear Mark

**Asbestos Identification**
This report presents the results of thirty six samples, forwarded by Aargus Engineering Trust Pty Ltd on 16 October 2024, for analysis for asbestos.

**1.Introduction:** Thirty six samples forwarded were examined and analysed for the presence of asbestos on 17 October 2024.

**2. Methods :** The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).**

The report also provides approximate weights and percentages, categories of asbestos forms appearing in the sample, such as **AF**(Asbestos Fines), **FA**(Friable Asbestos) and **ACM** (Asbestos Containing Material), also satisfying the requirements of the NEPM Guidelines).

**3. Results :**

**Sample No. 1. ASET121874 / 125054 / 1. ES9402/3 - BH1 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.2 cm
Approximate total dry weight of soil = 821.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 2. ASET121874 / 125054 / 2. ES9402/3 - BH2 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.3 cm
Approximate total dry weight of soil = 826.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 3. ASET121874 / 125054 / 3. ES9402/3 - BH3 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.6 cm
Approximate total dry weight of soil = 661.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 4. ASET121874 / 125054 / 4. ES9402/3 - BH4 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.8 cm
Approximate total dry weight of soil = 677.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 5. ASET121874 / 125054 / 5. ES9402/3 - BH5 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.5 cm
Approximate total dry weight of soil = 645.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 6. ASET121874 / 125054 / 6. ES9402/3 - BH6 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.7 cm
Approximate total dry weight of soil = 665.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 7. ASET121874 / 125054 / 7. ES9402/3 - BH7 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.7 cm
Approximate total dry weight of soil = 669.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 8. ASET121874 / 125054 / 8. ES9402/3 - BH8 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.7 cm
Approximate total dry weight of soil = 674.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of cement, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 9. ASET121874 / 125054 / 9. ES9402/3 - BH9 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.8 cm
Approximate total dry weight of soil = 675.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of mica like material, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 10. ASET121874 / 125054 / 10. ES9402/3 - BH10 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.5 cm
The sample consisted of a mixture of sandy soil, fibres^ (AF), organic fibres, stones, fragments of fibre cement# (AF), sandstone, wood chips and plant matter.
**Chrysotile^# (Approximate estimated weight as fibres = 0.0001g and fibre cement = 0.14g) asbestos and Amosite^# (Approximate estimated weight as fibres = 0.0001g and fibre cement = 0.03g) asbestos detected.**
**Approximate total dry weight of soil = 753.0g.**
**Approximate estimated weight of asbestos in soil in the form of AF = 0.1702g. Approximate w/w percentage of asbestos in soil in the form of AF = 0.02%.**

**Sample No. 11. ASET121874 / 125054 / 11. ES9402/3 - BH11 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.0 cm
The sample consisted of a mixture of sandy soil, fibres^ (AF), organic fibres, stones, fragments of fibre cement# (AF), sandstone and plant matter.
**Chrysotile^# (Approximate estimated weight as fibres = 0.0005g and AF = 0.04g) asbestos and Amosite^# (Approximate estimated weight as fibres = 0.0003g and AF = 0.01g) asbestos detected.**
**Approximate total dry weight of soil = 697.0g.**
**Approximate estimated weight of asbestos in soil in the form of AF = 0.0508g. Approximate w/w percentage of asbestos in soil in the form of AF = 0.01%.**

**Sample No. 12. ASET121874 / 125054 / 12. ES9402/3 - BH12 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.1 cm
The sample consisted of a mixture of sandy soil, fibres^ (AF), organic fibres, stones, fragments of fibre cement*# (ACM and AF), sandstone and plant matter.
**Chrysotile^*# (Approximate estimated weight as fibres = 0.0002g, ACM = 0.04g and AF = 0.06g) asbestos and Amosite^*# (Approximate estimated weight as fibres = 0.00005g, ACM = 0.01g and AF = 0.01g) asbestos detected.**
**Approximate total dry weight of ACM = 0.32g.**
**Approximate total dry weight of soil = 706.0g.**
**Approximate estimated weight of asbestos in soil in the form of ACM = 0.05g. Approximate w/w percentage of asbestos in soil in the form of ACM = 0.01%. Approximate estimated weight of asbestos in soil in the form of AF = 0.07025g. Approximate w/w percentage of asbestos in soil in the form of AF = 0.01%.**

**Sample No. 13. ASET121874 / 125054 / 13. ES9402/3 - BH13 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.1 cm
Approximate total dry weight of soil = 714.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 14. ASET121874 / 125054 / 14. ES9402/3 - BH14 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 476.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 15. ASET121874 / 125054 / 15. ES9402/3 - BH15 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.1 cm
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of fibre cement# (AF), sandstone, wood chips and plant matter.
**Chrysotile# (Approximate estimated weight = 0.03g) asbestos and Amosite# (Approximate estimated weight = 0.01g) asbestos detected.**
**Approximate total dry weight of soil = 806.0g.**
**Approximate estimated weight of asbestos in soil in the form of AF = 0.04g. Approximate w/w percentage of asbestos in soil in the form of AF = 0.005%.**

**Sample No. 16. ASET121874 / 125054 / 16. ES9402/3 - BH16 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 6.9 cm
Approximate total dry weight of soil = 691.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 17. ASET121874 / 125054 / 17. ES9402/3 - BH17 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.5 cm
The sample consisted of a mixture of sandy soil, stones, fragments of fibre cement# (AF), paint flakes, sandstone, wood chips and plant matter.
**Chrysotile# (Approximate estimated weight = 0.004g) asbestos, Amosite# (Approximate estimated weight = 0.001g) asbestos and Crocidolite# (Approximate estimated weight = 0.002g) asbestos detected.**
**Approximate total dry weight of soil = 848.0g.**
**Approximate estimated weight of asbestos in soil in the form of AF = 0.007g. Approximate w/w percentage of asbestos in soil in the form of AF = 0.001%.**

**Sample No. 18. ASET121874 / 125054 / 18. ES9402/3 - BH18 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.7 cm
Approximate total dry weight of soil = 872.0g.
The sample consisted of a mixture of sandy soil, stones, fragments of brick, glass, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 19. ASET121874 / 125054 / 19. ES9402/3 - BH19 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.2 cm
Approximate total dry weight of soil = 820.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of paint flakes, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 20. ASET121874 / 125054 / 20. ES9402/3 - BH20 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.8 cm
Approximate total dry weight of soil = 880.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 21. ASET121874 / 125054 / 21. ES9402/3 - BH21 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.7 cm
Approximate total dry weight of soil = 770.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 22. ASET121874 / 125054 / 22. ES9402/3 - BH22 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.6 cm
Approximate total dry weight of soil = 759.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 23. ASET121874 / 125054 / 23. ES9402/3 - BH23 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 7.9 cm
Approximate total dry weight of soil = 788.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 24. ASET121874 / 125054 / 24. ES9402/3 - BH24 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.4 cm
Approximate total dry weight of soil = 840.0g.
The sample consisted of a mixture of sandy soil, stones, fragments of cement, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 25. ASET121874 / 125054 / 25. ES9402/3 - BH25 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.8 cm
Approximate total dry weight of soil = 875.0g.
The sample consisted of a mixture of sandy soil, stones, fragments of cement, glass, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 26. ASET121874 / 125054 / 26. ES9402/3 - BH26 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.7 cm
Approximate total dry weight of soil = 865.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of cement, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 27. ASET121874 / 125054 / 27. ES9402/3 - BH27 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 9.4 cm
Approximate total dry weight of soil = 944.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone and plant matter.
**No asbestos detected.**

**Sample No. 28. ASET121874 / 125054 / 28. ES9402/3 - BH28 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 9.9 cm
Approximate total dry weight of soil = 988.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of brick like material, cement, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 29. ASET121874 / 125054 / 29. ES9402/3 - BH29 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 10.0 cm
Approximate total dry weight of soil = 997.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of glass, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 30. ASET121874 / 125054 / 30. ES9402/3 - BH30 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.6 cm
Approximate total dry weight of soil = 856.0g.
The sample consisted of a mixture of sandy soil, stones, fragments of cement, glass, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 31. ASET121874 / 125054 / 31. ES9402/3 - BH31 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.4 cm
Approximate total dry weight of soil = 835.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 32. ASET121874 / 125054 / 32. ES9402/3 - BH32 - 0-0.1.**
Approx dimensions 10.0 cm x 10.0 cm x 8.7 cm
Approximate total dry weight of soil = 870.0g.
The sample consisted of a mixture of sandy soil, stones, fragments of cement like material, glass, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 33. ASET121874/ 125054/ 33. ES9402/3 - Duplicate D1.**
Approx dimensions 10.0 cm x 10.0 cm x 5.4 cm
Approximate total dry weight of soil = 537.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 34. ASET121874 / 125054 / 34. ES9402/3 - Duplicate D2.**
Approx dimensions 10.0 cm x 10.0 cm x 6.1 cm
Approximate total dry weight of soil = 605.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of glass, sandstone, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 35. ASET121874 / 125054 / 35. ES9402/3 - Duplicate D3.**
Approx dimensions 10.0 cm x 10.0 cm x 5.4 cm
Approximate total dry weight of soil = 538.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones, fragments of soft fibrous material containing organic fibres, wood chips and plant matter.
**No asbestos detected.**

**Sample No. 36. ASET121874 / 125054 / 36. ES9402/3 - Duplicate D4.**
Approx dimensions 10.0 cm x 10.0 cm x 5.1 cm
Approximate total dry weight of soil = 507.0g.
The sample consisted of a mixture of sandy soil, stones, sandstone, wood chips and plant matter.
**No asbestos detected.**

Reported by,



**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)**
**Occupational Hygienist / Approved Identifier.**
**Approved Signatory**

WORLD RECOGNISED ACCREDITATION

**Accredited for compliance with ISO/IEC 17025 - Testing.**

***This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia and it also satisfies the requirements of the current NEPM Guidelines. NATA Accreditation does not cover the performance of this service.***

***Disclaimers***;

***The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos, as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported. This weight disclaimer also covers weight / weight percentages if given.***

**ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.**

**AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.**

**FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.**

**^ denotes loose fibres of relevant asbestos types detected in soil/dust.**
*** denotes asbestos detected in ACM in bonded form.**
**# denotes friable asbestos as soft fibro plaster, fragments of ACM smaller than 7mm which are considered as friable and / or highly weathered ACM that will easily crumble.**
**λ denotes samples that have been analysed only in accordance to AS 4964 – 2004.**
**Ω Sample volume criteria of 500mL have not been satisfied.**

*The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected and trace analysis have been performed on each sample as required by AS4964-2004. When loose asbestos fibres/ fibre bundles are detected and reported that means they are larger handpicked fibres/ fibre bundles, and they do not represent respirable fibres. Dust/soil samples are always subjected to trace analysis except where the amounts involved are extremely minute and trace analysis is not possible to be carried out. When trace analysis is not performed on dust samples it will be indicated in the report that trace analysis has not been carried out due to the volume of the sample being extremely minute.*

*Estimation of asbestos weights involves the use of following assumptions;*
*Volume of each kind of Asbestos present in broken edges have been visually estimated and its been assumed that volumes remain similar throughout the binding matrix and those volumes are only approximate and not exact. Material densities have been assumed to be similar to commonly found similar materials and may not be exact.*

**All samples indicating "No asbestos detected" are assumed to be less than 0.001% for friable AF and FA portions detected and 0.01 % for ACM detected unless the approximate weight is given.**

ASET121874 /125054 /1-3b

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398 Tel: 1300 137 038
DRUMMOYNE NSW 1470 Fax: 1300 136 038

Email reports: admin@aargus.net; cynthia@aargus.net; harsha@aargus.net; sagar@aargus.net; mark.kelly@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



| | | | |
|---|---|---|---|
| **TO:** | **ASET - Australian Safer Environment & Technology Pty Ltd, Sydney** | **Sampling Date:** | 09.10.2024 |
| | **Suite 710 / 90 George Street** **PO Box 1644** | **Job No:** | ES9402/3 |
| | **HORNSBY, NSW 2077** **HORNSBY WESTFIELD NSW 1635** | **Sampled By:** | HM |
| **PH:** | **02 9987 2183** **FAX:** **02 9987 2151** | **Project:** | DSI |
| **ATTN:** | **Samples Receipt** **EMAIL** aset@bigpond.net.au | **Project Manager:** | MK |
| | | **Location:** | Oxford Falls |

**Results required by: STANDARD**

| | Sampling details | | | Sample type | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location | Depth (m) | Date | Soil Samples | Asbestos presence/absence | Asbestos %w/w | | | | | | | | | KEEP SAMPLE? |
| 1 | BH1 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 2 | BH2 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 3 | BH3 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 4 | BH4 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 5 | BH5 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 6 | BH6 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 7 | BH7 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 8 | BH8 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 9 | BH9 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 10 | BH10 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 11 | BH11 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 12 | BH12 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 13 | BH13 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 14 | BH14 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 15 | BH15 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 16 | BH16 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 17 | BH17 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 18 | BH18 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 19 | BH19 | 0-0.1 | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |

RECEIVED
16 OCT 2024
BY: VH

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | VH | | 2.50 pm. |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | USG | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | DSG | Disturbed soil sample (glass jar) | ✓ | Test required |
| GV | Glass vial | OTH | Other | ACAN | Air sample, canister |

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# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398 Tel: 1300 137 038
DRUMMOYNE NSW 1470 Fax: 1300 136 038

Email reports: admin@aargus.net; cynthia@aargus.net; harsha@aargus.net; sagar@aargus.net; mark.kelly@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



| | | | |
|---|---|---|---|
| **TO:** | **ASET - Australian Safer Environment & Technology Pty Ltd, Sydney** | **Sampling Date:** | 10.10.2024 |
| | **Suite 710 / 90 George Street** | **PO Box 1644** | **Job No:** ES9402/3 |
| | **HORNSBY, NSW 2077** | **HORNSBY WESTFIELD NSW 1635** | **Sampled By:** HM **Project:** DSI |
| **PH:** | **02 9987 2183** | **FAX:** **02 9987 2151** | **Project Manager:** MK **Location:** Oxford Falls |
| **ATTN:** | **Samples Receipt** | **EMAIL** aset@bigpond.net.au | |

**Results required by: STANDARD**

| | Sampling details | | | Sample type | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location | Depth (m) | Date | Soil Samples | Asbestos presence/absence | Asbestos %w/w | | | | | | | | | KEEP SAMPLE? |
| 20 | BH20 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 21 | BH21 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 22 | BH22 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 23 | BH23 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 24 | BH24 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 25 | BH25 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 26 | BH26 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 27 | BH27 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 28 | BH28 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 29 | BH29 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 30 | BH30 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 31 | BH31 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 32 | BH32 | 0-0.1 | 10.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 33 | DUPLICATE D1 | - | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 34 | DUPLICATE D2 | - | 09.10.2024 | DSP | | ✓ | | | | | | | | | YES |
| 35 | DUPLICATE D3 | - | 10.10.2024 | DSP | | | | | | | | | | | YES |
| 36 | DUPLICATE D4 | - | 10.10.2024 | DSP | | | | | | | | | | | YES |

RECEIVED
16 OCT 2024
BY: VG

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | | | |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | USG | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | DSG | Disturbed soil sample (glass jar) | ✓ | Test required |
| GV | Glass vial | OTH | Other | ACAN | Air sample, canister |

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# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2433991** | Page | : 1 of 7 |
| Client | : **AARGUS ENGINEERING TRUST** | Laboratory | : Environmental Division Sydney |
| Contact | : CYNTHIA | Contact | : Customer Services ES |
| Address | : 46 Smithfield Road<br>Smithfield 2164 | Address | : 277-289 Woodpark Road Smithfield NSW Australia 2164 |
| Telephone | : ---- | Telephone | : +61-2-8784 8555 |
| Project | : ES9402/3 DSI | Date Samples Received | : 16-Oct-2024 12:30 |
| Order number | : ---- | Date Analysis Commenced | : 18-Oct-2024 |
| C-O-C number | : ---- | Issue Date | : 23-Oct-2024 15:33 |
| Sampler | : HM | | |
| Site | : OXFORD FALLS | | |
| Quote number | : EN/222 | | |
| No. of samples received | : 2 | | |
| No. of samples analysed | : 2 | | |

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

## *Signatories*

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

| *Signatories* | *Position* | *Accreditation Category* |
|---|---|---|
| Dian Dao | Senior Chemist - Inorganics | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Organics, Smithfield, NSW |

## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- Unable to conduct ASBESTOS analysis as the bag was not received.

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | SS1 | SS2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 09-Oct-2024 00:00 | 09-Oct-2024 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | | ES2433991-001 | ES2433991-002 | -------- | -------- | -------- |
| | | | | | Result | Result | ---- | ---- | ---- |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | | **14.6** | **19.0** | ---- | ---- | ---- |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | | <5 | <5 | ---- | ---- | ---- |
| Cadmium | 7440-43-9 | 1 | mg/kg | | <1 | <1 | ---- | ---- | ---- |
| Chromium | 7440-47-3 | 2 | mg/kg | | **10** | **11** | ---- | ---- | ---- |
| Copper | 7440-50-8 | 5 | mg/kg | | **8** | **12** | ---- | ---- | ---- |
| Lead | 7439-92-1 | 5 | mg/kg | | **20** | **19** | ---- | ---- | ---- |
| Nickel | 7440-02-0 | 2 | mg/kg | | **2** | **3** | ---- | ---- | ---- |
| Zinc | 7440-66-6 | 5 | mg/kg | | **35** | **41** | ---- | ---- | ---- |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | | |
| Mercury | 7439-97-6 | 0.1 | mg/kg | | <0.1 | <0.1 | ---- | ---- | ---- |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | | |
| Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | | **----** | <0.1 | ---- | ---- | ---- |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | | |
| alpha-BHC | 319-84-6 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| beta-BHC | 319-85-7 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| delta-BHC | 319-86-8 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| Heptachlor | 76-44-8 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| Aldrin | 309-00-2 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| Heptachlor epoxide | 1024-57-3 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| ^ Total Chlordane (sum) | ---- | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| alpha-Endosulfan | 959-98-8 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| cis-Chlordane | 5103-71-9 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |
| Dieldrin | 60-57-1 | 0.05 | mg/kg | | <0.05 | <0.05 | ---- | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | SS1 | SS2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 09-Oct-2024 00:00 | 09-Oct-2024 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2433991-001 | ES2433991-002 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EP068A: Organochlorine Pesticides (OC) - Continued** | | | | | | | | |
| **4.4`-DDE** | 72-55-9 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **Endrin** | 72-20-8 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **beta-Endosulfan** | 33213-65-9 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| ^ **Endosulfan (sum)** | 115-29-7 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **4.4`-DDD** | 72-54-8 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **Endrin aldehyde** | 7421-93-4 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **Endosulfan sulfate** | 1031-07-8 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **4.4`-DDT** | 50-29-3 | 0.2 | mg/kg | <0.2 | <0.2 | ---- | ---- | ---- |
| **Endrin ketone** | 53494-70-5 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **Methoxychlor** | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | ---- | ---- | ---- |
| ^ **Sum of Aldrin + Dieldrin** | 309-00-2/60-57-1 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| ^ **Sum of DDD + DDE + DDT** | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05 | <0.05 | ---- | ---- | ---- |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |
| **Naphthalene** | 91-20-3 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Acenaphthylene** | 208-96-8 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Acenaphthene** | 83-32-9 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Fluorene** | 86-73-7 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Phenanthrene** | 85-01-8 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Anthracene** | 120-12-7 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Fluoranthene** | 206-44-0 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Pyrene** | 129-00-0 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Benz(a)anthracene** | 56-55-3 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Chrysene** | 218-01-9 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Benzo(b+j)fluoranthene** | 205-99-2 205-82-3 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Benzo(k)fluoranthene** | 207-08-9 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Benzo(a)pyrene** | 50-32-8 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | | Sample ID | SS1 | SS2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sampling date / time | 09-Oct-2024 00:00 | 09-Oct-2024 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | | ES2433991-001 | ES2433991-002 | -------- | -------- | -------- |
| | | | | | Result | Result | ---- | ---- | ---- |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued** | | | | | | | | | |
| **Indeno(1.2.3.cd)pyrene** | 193-39-5 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| **Dibenz(a.h)anthracene** | 53-70-3 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| **Benzo(g.h.i)perylene** | 191-24-2 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| ^ **Sum of polycyclic aromatic hydrocarbons** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| ^ **Benzo(a)pyrene TEQ (zero)** | ---- | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| ^ **Benzo(a)pyrene TEQ (half LOR)** | ---- | 0.5 | mg/kg | | **0.6** | **0.6** | ---- | ---- | ---- |
| ^ **Benzo(a)pyrene TEQ (LOR)** | ---- | 0.5 | mg/kg | | **1.2** | **1.2** | ---- | ---- | ---- |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | | | |
| **C6 - C9 Fraction** | ---- | 10 | mg/kg | | <10 | <10 | ---- | ---- | ---- |
| **C10 - C14 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | ---- | ---- | ---- |
| **C15 - C28 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | ---- | ---- | ---- |
| **C29 - C36 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | ---- | ---- | ---- |
| ^ **C10 - C36 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | ---- | ---- | ---- |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | | |
| **C6 - C10 Fraction** | C6_C10 | 10 | mg/kg | | <10 | <10 | ---- | ---- | ---- |
| ^ **C6 - C10 Fraction minus BTEX (F1)** | C6_C10-BTEX | 10 | mg/kg | | <10 | <10 | ---- | ---- | ---- |
| **>C10 - C16 Fraction** | ---- | 50 | mg/kg | | <50 | <50 | ---- | ---- | ---- |
| **>C16 - C34 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | ---- | ---- | ---- |
| **>C34 - C40 Fraction** | ---- | 100 | mg/kg | | <100 | <100 | ---- | ---- | ---- |
| ^ **>C10 - C40 Fraction (sum)** | ---- | 50 | mg/kg | | <50 | <50 | ---- | ---- | ---- |
| ^ **>C10 - C16 Fraction minus Naphthalene (F2)** | ---- | 50 | mg/kg | | <50 | <50 | ---- | ---- | ---- |
| **EP080: BTEXN** | | | | | | | | | |
| **Benzene** | 71-43-2 | 0.2 | mg/kg | | <0.2 | <0.2 | ---- | ---- | ---- |
| **Toluene** | 108-88-3 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| **Ethylbenzene** | 100-41-4 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |
| **meta- & para-Xylene** | 108-38-3 106-42-3 | 0.5 | mg/kg | | <0.5 | <0.5 | ---- | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | SS1 | SS2 | ---- | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 09-Oct-2024 00:00 | 09-Oct-2024 00:00 | ---- | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2433991-001 | ES2433991-002 | -------- | -------- | -------- |
| | | | | Result | Result | ---- | ---- | ---- |
| **EP080: BTEXN - Continued** | | | | | | | | |
| **ortho-Xylene** | 95-47-6 | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| ^ **Sum of BTEX** | ---- | 0.2 | mg/kg | <0.2 | <0.2 | ---- | ---- | ---- |
| ^ **Total Xylenes** | ---- | 0.5 | mg/kg | <0.5 | <0.5 | ---- | ---- | ---- |
| **Naphthalene** | 91-20-3 | 1 | mg/kg | <1 | <1 | ---- | ---- | ---- |
| **EP066S: PCB Surrogate** | | | | | | | | |
| **Decachlorobiphenyl** | 2051-24-3 | 0.1 | % | **----** | **71.7** | ---- | ---- | ---- |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | |
| **Dibromo-DDE** | 21655-73-2 | 0.05 | % | **79.9** | **83.5** | ---- | ---- | ---- |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | |
| **DEF** | 78-48-8 | 0.05 | % | **92.1** | **98.7** | ---- | ---- | ---- |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | |
| **Phenol-d6** | 13127-88-3 | 0.5 | % | **95.1** | **85.5** | ---- | ---- | ---- |
| **2-Chlorophenol-D4** | 93951-73-6 | 0.5 | % | **94.9** | **86.2** | ---- | ---- | ---- |
| **2.4.6-Tribromophenol** | 118-79-6 | 0.5 | % | **70.5** | **69.9** | ---- | ---- | ---- |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | |
| **2-Fluorobiphenyl** | 321-60-8 | 0.5 | % | **84.8** | **81.5** | ---- | ---- | ---- |
| **Anthracene-d10** | 1719-06-8 | 0.5 | % | **84.4** | **82.5** | ---- | ---- | ---- |
| **4-Terphenyl-d14** | 1718-51-0 | 0.5 | % | **82.6** | **80.4** | ---- | ---- | ---- |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | |
| **1.2-Dichloroethane-D4** | 17060-07-0 | 0.2 | % | **91.6** | **86.8** | ---- | ---- | ---- |
| **Toluene-D8** | 2037-26-5 | 0.2 | % | **96.0** | **92.8** | ---- | ---- | ---- |
| **4-Bromofluorobenzene** | 460-00-4 | 0.2 | % | **102** | **97.1** | ---- | ---- | ---- |

## Surrogate Control Limits

| Sub-Matrix: SOIL | | Recovery Limits (%) | |
|---|---|---|---|
| Compound | CAS Number | Low | High |
| **EP066S: PCB Surrogate** | | | |
| Decachlorobiphenyl | 2051-24-3 | 39 | 149 |
| **EP068S: Organochlorine Pesticide Surrogate** | | | |
| Dibromo-DDE | 21655-73-2 | 49 | 147 |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | |
| DEF | 78-48-8 | 35 | 143 |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | |
| Phenol-d6 | 13127-88-3 | 63 | 123 |
| 2-Chlorophenol-D4 | 93951-73-6 | 66 | 122 |
| 2.4.6-Tribromophenol | 118-79-6 | 40 | 138 |
| **EP075(SIM)T: PAH Surrogates** | | | |
| 2-Fluorobiphenyl | 321-60-8 | 70 | 122 |
| Anthracene-d10 | 1719-06-8 | 66 | 128 |
| 4-Terphenyl-d14 | 1718-51-0 | 65 | 129 |
| **EP080S: TPH(V)/BTEX Surrogates** | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 63 | 125 |
| Toluene-D8 | 2037-26-5 | 67 | 124 |
| 4-Bromofluorobenzene | 460-00-4 | 66 | 131 |

# QUALITY CONTROL REPORT

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2433991** | Page | : 1 of 8 |
| Client | : **AARGUS ENGINEERING TRUST** | Laboratory | : Environmental Division Sydney |
| Contact | : CYNTHIA | Contact | : Customer Services ES |
| Address | : 46 Smithfield Road<br>Smithfield 2164 | Address | : 277-289 Woodpark Road Smithfield NSW Australia 2164 |
| Telephone | : ---- | Telephone | : +61-2-8784 8555 |
| Project | : ES9402/3 DSI | Date Samples Received | : 16-Oct-2024 |
| Order number | : ---- | Date Analysis Commenced | : 18-Oct-2024 |
| C-O-C number | : ---- | Issue Date | : 23-Oct-2024 |
| Sampler | : HM | | |
| Site | : OXFORD FALLS | | |
| Quote number | : EN/222 | | |
| No. of samples received | : 2 | | |
| No. of samples analysed | : 2 | | |

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

## *Signatories*

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

| *Signatories* | *Position* | *Accreditation Category* |
|---|---|---|
| Dian Dao | Senior Chemist - Inorganics | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Organics, Smithfield, NSW |

## General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

## Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

| | | | | Laboratory Duplicate (DUP) Report | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Laboratory sample ID* | *Sample ID* | *Method: Compound* | *CAS Number* | *LOR* | *Unit* | *Original Result* | *Duplicate Result* | *RPD (%)* | *Acceptable RPD (%)* |
| **EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6134099)** | | | | | | | | | |
| ES2433781-002 | Anonymous | EG005T: Lead | 7439-92-1 | 5 | mg/kg | 273 | 255 | 6.8 | 0% - 20% |
| | | EG005T: Zinc | 7440-66-6 | 5 | mg/kg | 281 | 315 | 11.3 | 0% - 20% |
| ES2433138-004 | Anonymous | EG005T: Cadmium | 7440-43-9 | 1 | mg/kg | <1 | <1 | 0.0 | No Limit |
| | | EG005T: Chromium | 7440-47-3 | 2 | mg/kg | <2 | <2 | 0.0 | No Limit |
| | | EG005T: Nickel | 7440-02-0 | 2 | mg/kg | 3 | 3 | 0.0 | No Limit |
| | | EG005T: Arsenic | 7440-38-2 | 5 | mg/kg | 6 | 6 | 0.0 | No Limit |
| | | EG005T: Copper | 7440-50-8 | 5 | mg/kg | <5 | <5 | 0.0 | No Limit |
| | | EG005T: Lead | 7439-92-1 | 5 | mg/kg | 7 | 6 | 0.0 | No Limit |
| | | EG005T: Zinc | 7440-66-6 | 5 | mg/kg | 20 | 18 | 12.9 | No Limit |
| ES2433781-002 | Anonymous | EG005T: Cadmium | 7440-43-9 | 1 | mg/kg | <1 | <1 | 0.0 | No Limit |
| | | EG005T: Chromium | 7440-47-3 | 2 | mg/kg | 14 | 10 | 35.0 | No Limit |
| | | EG005T: Nickel | 7440-02-0 | 2 | mg/kg | 8 | 8 | 0.0 | No Limit |
| | | EG005T: Arsenic | 7440-38-2 | 5 | mg/kg | 8 | 6 | 27.7 | No Limit |
| | | EG005T: Copper | 7440-50-8 | 5 | mg/kg | 37 | 38 | 0.0 | No Limit |
| **EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6134108)** | | | | | | | | | |
| ES2433138-004 | Anonymous | EA055: Moisture Content | ---- | 0.1 (1.0)* | % | 7.2 | 7.6 | 5.2 | No Limit |
| ES2433781-001 | Anonymous | EA055: Moisture Content | ---- | 0.1 (1.0)* | % | 18.0 | 19.4 | 7.7 | 0% - 50% |
| **EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6134100)** | | | | | | | | | |
| ES2433138-004 | Anonymous | EG035T: Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | <0.1 | 0.0 | No Limit |
| ES2433781-002 | Anonymous | EG035T: Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | <0.1 | 0.0 | No Limit |

Sub-Matrix: **SOIL**

| | | | | Laboratory Duplicate (DUP) Report | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Laboratory sample ID | Sample ID | Method: Compound | CAS Number | LOR | Unit | Original Result | Duplicate Result | RPD (%) | Acceptable RPD (%) |
| **EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6129602)** | | | | | | | | | |
| ES2433991-002 | SS2 | EP066: Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | 0.0 | No Limit |
| **EP068A: Organochlorine Pesticides (OC) (QC Lot: 6129601)** | | | | | | | | | |
| ES2433991-002 | SS2 | EP068: alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: beta-BHC | 319-85-7 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: delta-BHC | 319-86-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Heptachlor epoxide | 1024-57-3 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: alpha-Endosulfan | 959-98-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: cis-Chlordane | 5103-71-9 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Dieldrin | 60-57-1 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: 4.4`-DDE | 72-55-9 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Endrin | 72-20-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: beta-Endosulfan | 33213-65-9 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: 4.4`-DDD | 72-54-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Endrin aldehyde | 7421-93-4 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Endosulfan sulfate | 1031-07-8 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: Endrin ketone | 53494-70-5 | 0.05 | mg/kg | <0.05 | <0.05 | 0.0 | No Limit |
| | | EP068: 4.4`-DDT | 50-29-3 | 0.2 | mg/kg | <0.2 | <0.2 | 0.0 | No Limit |
| | | EP068: Methoxychlor | 72-43-5 | 0.2 | mg/kg | <0.2 | <0.2 | 0.0 | No Limit |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6129600)** | | | | | | | | | |
| ES2433991-002 | SS2 | EP075(SIM): Naphthalene | 91-20-3 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Acenaphthylene | 208-96-8 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Acenaphthene | 83-32-9 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Fluorene | 86-73-7 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Phenanthrene | 85-01-8 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Anthracene | 120-12-7 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Fluoranthene | 206-44-0 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Pyrene | 129-00-0 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Chrysene | 218-01-9 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benzo(b+j)fluoranthene | 205-99-2<br>205-82-3 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |

Sub-Matrix: **SOIL**

| | | | | Laboratory Duplicate (DUP) Report | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Laboratory sample ID* | *Sample ID* | *Method: Compound* | *CAS Number* | *LOR* | *Unit* | *Original Result* | *Duplicate Result* | *RPD (%)* | *Acceptable RPD (%)* |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6129600) - continued** | | | | | | | | | |
| ES2433991-002 | SS2 | EP075(SIM): Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Sum of polycyclic aromatic hydrocarbons | ---- | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP075(SIM): Benzo(a)pyrene TEQ (zero) | ---- | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| **EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6129599)** | | | | | | | | | |
| ES2433991-002 | SS2 | EP071: C15 - C28 Fraction | ---- | 100 | mg/kg | <100 | <100 | 0.0 | No Limit |
| | | EP071: C29 - C36 Fraction | ---- | 100 | mg/kg | <100 | <100 | 0.0 | No Limit |
| | | EP071: C10 - C14 Fraction | ---- | 50 | mg/kg | <50 | <50 | 0.0 | No Limit |
| **EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6129986)** | | | | | | | | | |
| EN2413052-001 | Anonymous | EP080: C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | <10 | 0.0 | No Limit |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6129599)** | | | | | | | | | |
| ES2433991-002 | SS2 | EP071: >C16 - C34 Fraction | ---- | 100 | mg/kg | <100 | <100 | 0.0 | No Limit |
| | | EP071: >C34 - C40 Fraction | ---- | 100 | mg/kg | <100 | <100 | 0.0 | No Limit |
| | | EP071: >C10 - C16 Fraction | ---- | 50 | mg/kg | <50 | <50 | 0.0 | No Limit |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6129986)** | | | | | | | | | |
| EN2413052-001 | Anonymous | EP080: C6 - C10 Fraction | C6_C10 | 10 | mg/kg | 11 | 14 | 21.2 | No Limit |
| **EP080: BTEXN (QC Lot: 6129986)** | | | | | | | | | |
| EN2413052-001 | Anonymous | EP080: Benzene | 71-43-2 | 0.2 | mg/kg | <0.2 | <0.2 | 0.0 | No Limit |
| | | EP080: Toluene | 108-88-3 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP080: Ethylbenzene | 100-41-4 | 0.5 | mg/kg | <0.5 | <0.5 | 0.0 | No Limit |
| | | EP080: meta- & para-Xylene | 108-38-3<br>106-42-3 | 0.5 | mg/kg | 1.0 | 1.3 | 24.1 | No Limit |
| | | EP080: ortho-Xylene | 95-47-6 | 0.5 | mg/kg | <0.5 | 0.5 | 0.0 | No Limit |
| | | EP080: Naphthalene | 91-20-3 | 1 | mg/kg | <1 | <1 | 0.0 | No Limit |

## Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

| | | | | Method Blank (MB) Report | Laboratory Control Spike (LCS) Report | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Spike | Spike Recovery (%) | Acceptable Limits (%) | |
| Method: Compound | CAS Number | LOR | Unit | Result | Concentration | LCS | Low | High |
| **EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6134099)** | | | | | | | | |
| EG005T: Arsenic | 7440-38-2 | 5 | mg/kg | <5 | 121.1 mg/kg | 96.4 | 88.0 | 113 |
| EG005T: Cadmium | 7440-43-9 | 1 | mg/kg | <1 | 0.74 mg/kg | 88.7 | 70.0 | 130 |
| EG005T: Chromium | 7440-47-3 | 2 | mg/kg | <2 | 19.6 mg/kg | 111 | 68.0 | 132 |
| EG005T: Copper | 7440-50-8 | 5 | mg/kg | <5 | 52.9 mg/kg | 107 | 89.0 | 111 |
| EG005T: Lead | 7439-92-1 | 5 | mg/kg | <5 | 60.8 mg/kg | 95.0 | 82.0 | 119 |
| EG005T: Nickel | 7440-02-0 | 2 | mg/kg | <2 | 15.3 mg/kg | 97.4 | 80.0 | 120 |
| EG005T: Zinc | 7440-66-6 | 5 | mg/kg | <5 | 139.3 mg/kg | 92.6 | 66.0 | 133 |
| **EG035T: Total Recoverable Mercury by FIMS (QCLot: 6134100)** | | | | | | | | |
| EG035T: Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | 0.087 mg/kg | 85.0 | 70.0 | 125 |
| **EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6129602)** | | | | | | | | |
| EP066: Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | 1 mg/kg | 89.6 | 62.0 | 126 |
| **EP068A: Organochlorine Pesticides (OC) (QCLot: 6129601)** | | | | | | | | |
| EP068: alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 82.5 | 69.0 | 113 |
| EP068: Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 81.8 | 65.0 | 117 |
| EP068: beta-BHC | 319-85-7 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 78.6 | 67.0 | 119 |
| EP068: gamma-BHC - (Lindane) | 58-89-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 80.6 | 68.0 | 116 |
| EP068: delta-BHC | 319-86-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 81.8 | 65.0 | 117 |
| EP068: Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 80.2 | 67.0 | 115 |
| EP068: Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 80.7 | 69.0 | 115 |
| EP068: Heptachlor epoxide | 1024-57-3 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 80.8 | 62.0 | 118 |
| EP068: trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 81.4 | 63.0 | 117 |
| EP068: alpha-Endosulfan | 959-98-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 85.9 | 66.0 | 116 |
| EP068: cis-Chlordane | 5103-71-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 82.8 | 64.0 | 116 |
| EP068: Dieldrin | 60-57-1 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 91.8 | 66.0 | 116 |
| EP068: 4.4`-DDE | 72-55-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 82.7 | 67.0 | 115 |
| EP068: Endrin | 72-20-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 87.0 | 67.0 | 123 |
| EP068: beta-Endosulfan | 33213-65-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 85.8 | 69.0 | 115 |
| EP068: 4.4`-DDD | 72-54-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 79.8 | 69.0 | 121 |
| EP068: Endrin aldehyde | 7421-93-4 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 84.4 | 56.0 | 120 |
| EP068: Endosulfan sulfate | 1031-07-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 80.1 | 62.0 | 124 |

Sub-Matrix: **SOIL**

| Method: Compound | CAS Number | LOR | Unit | Method Blank (MB) Report | Laboratory Control Spike (LCS) Report | | |
|---|---|---|---|---|---|---|---|
| | | | | | Spike | Spike Recovery (%) | Acceptable Limits (%) | |
| | | | | Result | Concentration | LCS | Low | High |
| **EP068A: Organochlorine Pesticides (OC) (QCLot: 6129601) - continued** | | | | | | | | |
| EP068: 4.4`-DDT | 50-29-3 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 82.6 | 66.0 | 120 |
| EP068: Endrin ketone | 53494-70-5 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 82.4 | 64.0 | 122 |
| EP068: Methoxychlor | 72-43-5 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 81.4 | 54.0 | 130 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6129600)** | | | | | | | | |
| EP075(SIM): Naphthalene | 91-20-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.9 | 77.0 | 125 |
| EP075(SIM): Acenaphthylene | 208-96-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.0 | 72.0 | 124 |
| EP075(SIM): Acenaphthene | 83-32-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 96.2 | 73.0 | 127 |
| EP075(SIM): Fluorene | 86-73-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.5 | 72.0 | 126 |
| EP075(SIM): Phenanthrene | 85-01-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 99.0 | 75.0 | 127 |
| EP075(SIM): Anthracene | 120-12-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.0 | 77.0 | 127 |
| EP075(SIM): Fluoranthene | 206-44-0 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.8 | 73.0 | 127 |
| EP075(SIM): Pyrene | 129-00-0 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.4 | 74.0 | 128 |
| EP075(SIM): Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.4 | 69.0 | 123 |
| EP075(SIM): Chrysene | 218-01-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.9 | 75.0 | 127 |
| EP075(SIM): Benzo(b+j)fluoranthene | 205-99-2<br>205-82-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.1 | 68.0 | 116 |
| EP075(SIM): Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 95.0 | 74.0 | 126 |
| EP075(SIM): Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 94.7 | 70.0 | 126 |
| EP075(SIM): Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 92.9 | 61.0 | 121 |
| EP075(SIM): Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 88.9 | 62.0 | 118 |
| EP075(SIM): Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 92.8 | 63.0 | 121 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 6129599)** | | | | | | | | |
| EP071: C10 - C14 Fraction | ---- | 50 | mg/kg | <50 | 300 mg/kg | 92.8 | 75.0 | 129 |
| EP071: C15 - C28 Fraction | ---- | 100 | mg/kg | <100 | 450 mg/kg | 104 | 77.0 | 131 |
| EP071: C29 - C36 Fraction | ---- | 100 | mg/kg | <100 | 300 mg/kg | 106 | 71.0 | 129 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 6129986)** | | | | | | | | |
| EP080: C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | 26 mg/kg | 84.8 | 72.2 | 131 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6129599)** | | | | | | | | |
| EP071: >C10 - C16 Fraction | ---- | 50 | mg/kg | <50 | 375 mg/kg | 97.6 | 77.0 | 125 |
| EP071: >C16 - C34 Fraction | ---- | 100 | mg/kg | <100 | 525 mg/kg | 105 | 74.0 | 138 |
| EP071: >C34 - C40 Fraction | ---- | 100 | mg/kg | <100 | 225 mg/kg | 110 | 63.0 | 131 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6129986)** | | | | | | | | |
| EP080: C6 - C10 Fraction | C6_C10 | 10 | mg/kg | <10 | 31 mg/kg | 88.1 | 72.4 | 133 |
| **EP080: BTEXN (QCLot: 6129986)** | | | | | | | | |

Sub-Matrix: **SOIL**

| Method: Compound | CAS Number | LOR | Unit | Method Blank (MB) Report: Result | Laboratory Control Spike (LCS) Report: Spike Concentration | LCS: Spike Recovery (%) | Acceptable Limits (%): Low | Acceptable Limits (%): High |
|---|---|---|---|---|---|---|---|---|
| **EP080: BTEXN (QCLot: 6129986) - continued** | | | | | | | | |
| EP080: Benzene | 71-43-2 | 0.2 | mg/kg | <0.2 | 1 mg/kg | 94.8 | 76.0 | 124 |
| EP080: Toluene | 108-88-3 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 96.8 | 78.5 | 121 |
| EP080: Ethylbenzene | 100-41-4 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 98.2 | 77.4 | 121 |
| EP080: meta- & para-Xylene | 108-38-3<br>106-42-3 | 0.5 | mg/kg | <0.5 | 2 mg/kg | 106 | 78.2 | 121 |
| EP080: ortho-Xylene | 95-47-6 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 104 | 81.3 | 121 |
| EP080: Naphthalene | 91-20-3 | 1 | mg/kg | <1 | 1 mg/kg | 90.8 | 78.8 | 122 |

## Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

| Laboratory sample ID | Sample ID | Method: Compound | CAS Number | Matrix Spike (MS) Report: Spike Concentration | SpikeRecovery(%): MS | Acceptable Limits (%): Low | Acceptable Limits (%): High |
|---|---|---|---|---|---|---|---|
| **EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6134099)** | | | | | | | |
| ES2433138-004 | Anonymous | EG005T: Arsenic | 7440-38-2 | 50 mg/kg | 109 | 70.0 | 130 |
| | | EG005T: Cadmium | 7440-43-9 | 50 mg/kg | 98.6 | 70.0 | 130 |
| | | EG005T: Chromium | 7440-47-3 | 50 mg/kg | 99.4 | 68.0 | 132 |
| | | EG005T: Copper | 7440-50-8 | 250 mg/kg | 96.2 | 70.0 | 130 |
| | | EG005T: Lead | 7439-92-1 | 250 mg/kg | 99.8 | 70.0 | 130 |
| | | EG005T: Nickel | 7440-02-0 | 50 mg/kg | 97.7 | 70.0 | 130 |
| | | EG005T: Zinc | 7440-66-6 | 250 mg/kg | 98.4 | 66.0 | 133 |
| **EG035T: Total Recoverable Mercury by FIMS (QCLot: 6134100)** | | | | | | | |
| ES2433138-004 | Anonymous | EG035T: Mercury | 7439-97-6 | 5 mg/kg | 95.1 | 70.0 | 130 |
| **EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6129602)** | | | | | | | |
| ES2433991-002 | SS2 | EP066: Total Polychlorinated biphenyls | ---- | 1 mg/kg | 78.2 | 70.0 | 130 |
| **EP068A: Organochlorine Pesticides (OC) (QCLot: 6129601)** | | | | | | | |
| ES2433991-002 | SS2 | EP068: gamma-BHC - (Lindane) | 58-89-9 | 0.5 mg/kg | 79.9 | 70.0 | 130 |
| | | EP068: Heptachlor | 76-44-8 | 0.5 mg/kg | 82.2 | 70.0 | 130 |
| | | EP068: Aldrin | 309-00-2 | 0.5 mg/kg | 74.6 | 70.0 | 130 |
| | | EP068: Dieldrin | 60-57-1 | 0.5 mg/kg | 90.9 | 70.0 | 130 |
| | | EP068: Endrin | 72-20-8 | 2 mg/kg | 79.8 | 70.0 | 130 |
| | | EP068: 4.4`-DDT | 50-29-3 | 2 mg/kg | 75.4 | 70.0 | 130 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6129600)** | | | | | | | |
| ES2433991-002 | SS2 | EP075(SIM): Acenaphthene | 83-32-9 | 10 mg/kg | 98.0 | 70.0 | 130 |
| | | EP075(SIM): Pyrene | 129-00-0 | 10 mg/kg | 98.3 | 70.0 | 130 |

Sub-Matrix: **SOIL**

| | | | | Matrix Spike (MS) Report | | | |
|---|---|---|---|---|---|---|---|
| | | | | Spike | SpikeRecovery(%) | Acceptable Limits (%) | |
| *Laboratory sample ID* | *Sample ID* | *Method: Compound* | *CAS Number* | *Concentration* | *MS* | *Low* | *High* |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 6129599)** | | | | | | | |
| ES2433991-002 | SS2 | EP071: C10 - C14 Fraction | ---- | 480 mg/kg | 95.3 | 73.0 | 137 |
| | | EP071: C15 - C28 Fraction | ---- | 3100 mg/kg | 92.7 | 53.0 | 131 |
| | | EP071: C29 - C36 Fraction | ---- | 2060 mg/kg | 102 | 52.0 | 132 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 6129986)** | | | | | | | |
| EN2413052-001 | Anonymous | EP080: C6 - C9 Fraction | ---- | 32.5 mg/kg | 99.1 | 60.4 | 142 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6129599)** | | | | | | | |
| ES2433991-002 | SS2 | EP071: >C10 - C16 Fraction | ---- | 860 mg/kg | 87.0 | 73.0 | 137 |
| | | EP071: >C16 - C34 Fraction | ---- | 4320 mg/kg | 99.2 | 53.0 | 131 |
| | | EP071: >C34 - C40 Fraction | ---- | 890 mg/kg | 99.7 | 52.0 | 132 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6129986)** | | | | | | | |
| EN2413052-001 | Anonymous | EP080: C6 - C10 Fraction | C6_C10 | 37.5 mg/kg | 90.9 | 61.1 | 142 |
| **EP080: BTEXN (QCLot: 6129986)** | | | | | | | |
| EN2413052-001 | Anonymous | EP080: Benzene | 71-43-2 | 2.5 mg/kg | 91.7 | 62.1 | 122 |
| | | EP080: Toluene | 108-88-3 | 2.5 mg/kg | 110 | 66.6 | 119 |
| | | EP080: Ethylbenzene | 100-41-4 | 2.5 mg/kg | 96.6 | 67.4 | 123 |
| | | EP080: meta- & para-Xylene | 108-38-3<br>106-42-3 | 2.5 mg/kg | 109 | 66.4 | 121 |
| | | EP080: ortho-Xylene | 95-47-6 | 2.5 mg/kg | 99.3 | 70.7 | 121 |
| | | EP080: Naphthalene | 91-20-3 | 2.5 mg/kg | 83.4 | 61.1 | 115 |

# QA/QC Compliance Assessment to assist with Quality Review

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2433991** | Page | : 1 of 4 |
| Client | : **AARGUS ENGINEERING TRUST** | Laboratory | : Environmental Division Sydney |
| Contact | : CYNTHIA | Telephone | : +61-2-8784 8555 |
| Project | : ES9402/3 DSI | Date Samples Received | : 16-Oct-2024 |
| Site | : OXFORD FALLS | Issue Date | : 23-Oct-2024 |
| Sampler | : HM | No. of samples received | : 2 |
| Order number | : ---- | No. of samples analysed | : 2 |

**This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.**

Brief method summaries and references are also provided to assist in traceability.

## *Summary of Outliers*

### *Outliers : Quality Control Samples*

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

### *Outliers : Analysis Holding Time Compliance*

- **NO Analysis Holding Time Outliers exist.**

### *Outliers : Frequency of Quality Control Samples*

- **NO Quality Control Sample Frequency Outliers exist.**

# Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

| Method / Container / Client Sample ID(s) | Sample Date | Extraction / Preparation | | | Analysis | | |
|---|---|---|---|---|---|---|---|
| | | Date extracted | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | |
| **Snap Lock Bag (EA055)** SS1, SS2 | **09-Oct-2024** | **----** | ---- | ---- | **21-Oct-2024** | 23-Oct-2024 | ✓ |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | |
| **Snap Lock Bag (EG005T)** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 07-Apr-2025 | ✓ | **22-Oct-2024** | 07-Apr-2025 | ✓ |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | |
| **Snap Lock Bag (EG035T)** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 06-Nov-2024 | ✓ | **23-Oct-2024** | 06-Nov-2024 | ✓ |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | |
| **Snap Lock Bag (EP066)** SS2 | **09-Oct-2024** | **21-Oct-2024** | 23-Oct-2024 | ✓ | **21-Oct-2024** | 30-Nov-2024 | ✓ |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | |
| **Snap Lock Bag (EP068)** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 23-Oct-2024 | ✓ | **22-Oct-2024** | 30-Nov-2024 | ✓ |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | |
| **Snap Lock Bag (EP075(SIM))** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 23-Oct-2024 | ✓ | **22-Oct-2024** | 30-Nov-2024 | ✓ |
| **EP080/071: Total Petroleum Hydrocarbons** | | | | | | | |
| **Snap Lock Bag (EP080)** SS1, SS2 | **09-Oct-2024** | **18-Oct-2024** | 23-Oct-2024 | ✓ | **22-Oct-2024** | 23-Oct-2024 | ✓ |
| **Snap Lock Bag (EP071)** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 23-Oct-2024 | ✓ | **21-Oct-2024** | 30-Nov-2024 | ✓ |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | |
| **Snap Lock Bag (EP080)** SS1, SS2 | **09-Oct-2024** | **18-Oct-2024** | 23-Oct-2024 | ✓ | **22-Oct-2024** | 23-Oct-2024 | ✓ |
| **Snap Lock Bag (EP071)** SS1, SS2 | **09-Oct-2024** | **21-Oct-2024** | 23-Oct-2024 | ✓ | **21-Oct-2024** | 30-Nov-2024 | ✓ |
| **EP080: BTEXN** | | | | | | | |
| **Snap Lock Bag (EP080)** SS1, SS2 | **09-Oct-2024** | **18-Oct-2024** | 23-Oct-2024 | ✓ | **22-Oct-2024** | 23-Oct-2024 | ✓ |

# Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

| Quality Control Sample Type | | Count | | Rate (%) | | | Quality Control Specification |
|---|---|---|---|---|---|---|---|
| *Analytical Methods* | *Method* | *QC* | *Regular* | ***Actual*** | ***Expected*** | *Evaluation* | |
| **Laboratory Duplicates (DUP)** | | | | | | | |
| Moisture Content | EA055 | 2 | 20 | **10.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 8 | **12.50** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 5 | **20.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB) | EP066 | 1 | 4 | **25.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS | EG035T | 2 | 20 | **10.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 3 | 20 | **15.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 8 | **12.50** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 7 | **14.29** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| **Laboratory Control Samples (LCS)** | | | | | | | |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 5 | **20.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB) | EP066 | 1 | 4 | **25.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS | EG035T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 7 | **14.29** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| **Method Blanks (MB)** | | | | | | | |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 5 | **20.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB) | EP066 | 1 | 4 | **25.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS | EG035T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 7 | **14.29** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| **Matrix Spikes (MS)** | | | | | | | |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 5 | **20.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB) | EP066 | 1 | 4 | **25.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS | EG035T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 7 | **14.29** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |

## Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

| Analytical Methods | Method | Matrix | Method Descriptions |
|---|---|---|---|
| Moisture Content | EA055 | SOIL | In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3). |
| Total Metals by ICP-AES | EG005T | SOIL | In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3) |
| Total Mercury by FIMS | EG035T | SOIL | In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3) |
| Polychlorinated Biphenyls (PCB) | EP066 | SOIL | In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3). |
| Pesticides by GCMS | EP068 | SOIL | In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3). |
| TRH - Semivolatile Fraction | EP071 | SOIL | In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3). |
| PAH/Phenols (SIM) | EP075(SIM) | SOIL | In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3) |
| TRH Volatiles/BTEX | EP080 | SOIL | In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended. |

| Preparation Methods | Method | Matrix | Method Descriptions |
|---|---|---|---|
| Hot Block Digest for metals in soils sediments and sludges | EN69 | SOIL | In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3). |
| Methanolic Extraction of Soils for Purge and Trap | ORG16 | SOIL | In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS. |
| Tumbler Extraction of Solids | ORG17 | SOIL | In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis. |

# SAMPLE RECEIPT NOTIFICATION (SRN)

**Work Order** : **ES2433991**

| | | | |
|---|---|---|---|
| Client | : **AARGUS ENGINEERING TRUST** | Laboratory | : Environmental Division Sydney |
| Contact | : CYNTHIA | Contact | : Customer Services ES |
| Address | : 46 Smithfield Road<br>Smithfield 2164 | Address | : 277-289 Woodpark Road Smithfield<br>NSW Australia 2164 |
| E-mail | : cynthia@aargus.net | E-mail | : ALSEnviro.Sydney@ALSGlobal.com |
| Telephone | : ---- | Telephone | : +61-2-8784 8555 |
| Facsimile | : ---- | Facsimile | : +61-2-8784 8500 |
| Project | : ES9402/3 DSI | Page | : 1 of 3 |
| Order number | : ---- | Quote number | : ES2024THEAARG0001 (EN/222) |
| C-O-C number | : ---- | QC Level | : NEPM 2013 B3 & ALS QC Standard |
| Site | : OXFORD FALLS | | |
| Sampler | : HM | | |

## *Dates*

| | | | |
|---|---|---|---|
| Date Samples Received | : 16-Oct-2024 12:30 | Issue Date | : 18-Oct-2024 |
| Client Requested Due Date | : 23-Oct-2024 | Scheduled Reporting Date | : **23-Oct-2024** |

## *Delivery Details*

| | | | |
|---|---|---|---|
| Mode of Delivery | : Carrier | Security Seal | : Intact. |
| No. of coolers/boxes | : 1 | Temperature | : 16.7'C |
| Receipt Detail | : | No. of samples received / analysed | : 2 / 2 |

## *General Comments*

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Volatile organic compound analysis may be compromised as sample containers contained headspace. Please contact ALS for further information.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.
- Unable to conduct ASBESTOS analysis as the bag was not received.

## Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

| Method / Sample ID | Sample Container Received | Preferred Sample Container for Analysis |
|---|---|---|
| **PAH/Phenols (SIM) : EP075(SIM)** | | |
| SS1 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| SS2 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| **Pesticides by GCMS : EP068** | | |
| SS1 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| SS2 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| **Polychlorinated Biphenyls (PCB) : EP066** | | |
| SS2 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| **TRH - Semivolatile Fraction : EP071** | | |
| SS1 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| SS2 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| **TRH Volatiles/BTEX : EP080** | | |
| SS1 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |
| SS2 | - Snap Lock Bag | - Soil Glass Jar - Unpreserved |

## Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

| Laboratory sample ID | Sampling date / time | Sample ID | SOIL - EA055-103 Moisture Content | SOIL - EP068A (solids) Organochlorine Pesticides by GCMS | SOIL - S-08 TRH/BTEXN/PAH/OC/PCB/8 Metals | SOIL - S-26 8 metals/TRH/BTEXN/PAH |
|---|---|---|---|---|---|---|
| ES2433991-001 | 09-Oct-2024 00:00 | SS1 | ✓ | ✓ | | ✓ |
| ES2433991-002 | 09-Oct-2024 00:00 | SS2 | ✓ | | ✓ | |

## Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

## Requested Deliverables

**aargus eng**

| | | |
|---|---|---|
| - A4 - AU Tax Invoice (INV) | Email | aarguseng@gmail.com |

**CYNTHIA**

| | | |
|---|---|---|
| - *AU Certificate of Analysis - NATA (COA) | Email | cynthia@aargus.net |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) | Email | cynthia@aargus.net |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) | Email | cynthia@aargus.net |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | cynthia@aargus.net |
| - A4 - AU Tax Invoice (INV) | Email | cynthia@aargus.net |
| - Chain of Custody (CoC) (COC) | Email | cynthia@aargus.net |
| - EDI Format - ESDAT (ESDAT) | Email | cynthia@aargus.net |

**HARSHA**

| | | |
|---|---|---|
| - *AU Certificate of Analysis - NATA (COA) | Email | harsha@aargus.net |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) | Email | harsha@aargus.net |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) | Email | harsha@aargus.net |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | harsha@aargus.net |
| - Chain of Custody (CoC) (COC) | Email | harsha@aargus.net |
| - EDI Format - ESDAT (ESDAT) | Email | harsha@aargus.net |

**Invoices**

| | | |
|---|---|---|
| - A4 - AU Tax Invoice (INV) | Email | invoices@aargus.net |

**MARK KELLY**

| | | |
|---|---|---|
| - *AU Certificate of Analysis - NATA (COA) | Email | mark.kelly@aargus.net |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) | Email | mark.kelly@aargus.net |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) | Email | mark.kelly@aargus.net |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | mark.kelly@aargus.net |
| - A4 - AU Tax Invoice (INV) | Email | mark.kelly@aargus.net |
| - Chain of Custody (CoC) (COC) | Email | mark.kelly@aargus.net |
| - EDI Format - ESDAT (ESDAT) | Email | mark.kelly@aargus.net |

**Sagar**

| | | |
|---|---|---|
| - *AU Certificate of Analysis - NATA (COA) | Email | sagar@aargus.net |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) | Email | sagar@aargus.net |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) | Email | sagar@aargus.net |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | sagar@aargus.net |
| - Chain of Custody (CoC) (COC) | Email | sagar@aargus.net |
| - EDI Format - ESDAT (ESDAT) | Email | sagar@aargus.net |

Environmental Division
Sydney
Work Order Reference
ES2433991

Telephone : +61-2-8784 8555

# AARGUS ENGINEERING TRUST PTY.LTD

46 Smithfield Road
Smithfield NSW 2164

P O Box 398 Tel: 1300 137 038
DRUMMOYNE NSW 1470 Fax: 1300 136 038

Email reports: admin@aargus.net; cynthia@aargus.net; harsha@aargus.net; sagar@aargus.net; mark.kelly@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net

## Laboratory Test Request / Chain of Custody Record



TO: **ALS (Australian Laboratory Services) | Environmental**
**277 - 289 Woodpark Road**
**SMITHFIELD, NSW 2164**

**PH:** **02 8784 8555** **FAX:** **02 8784 8500**
**ATTN:** **Samples Receipt**

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD** **Client Code: "THEAARG"**

| Sampling details | | | Sample type | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Depth (m) | Date | Soil | Water (Filled Up) | Air | Metals (As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH & BTEX | PAH | OC | PCB | | | | Asbestos %w/w | Analysis Suite(s) | KEEP SAMPLE? |
| 1 SS1 | - | 09.10.2024 | DSG, DSP | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | S26 | YES |
| 2 SS2 | - | 09.10.2024 | DSG, DSP | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | S8 | YES |
| SS3 | - | 10.10.2024 | DSG, DSP | | | | | | | | | | | | | YES |
| SS4 | - | 10.10.2024 | DSG, DSP | | | | | | | | | | | | | YES |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 15.10.2024 | | | 16/10/24 02:32 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | USG | Undisturbed soil sample (glass j | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | DSG | Disturbed soil sample (glass jar | ✓ | Test required |
| GV | Glass vial | OTH | Other | ACAN | Air sample, canister |

@ mole $H^+$/tonne

# ANALYTICAL REPORT

Accreditation No. 2562

## CLIENT DETAILS

| | |
|---|---|
| Contact | Mark Kelly |
| Client | GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING T |
| Address | PO BOX 398<br>DRUMMOYNE NSW 2164 |
| Telephone | 1300137038 |
| Facsimile | (Not specified) |
| Email | mark.kelly@aargus.net |
| Project | **ES9402/3 Oxford Falls DSI** |
| Order Number | **COD ES9402/3** |
| Samples | 48 |

## LABORATORY DETAILS

| | |
|---|---|
| Manager | Shane McDermott |
| Laboratory | SGS Alexandria Environmental |
| Address | Unit 16, 33 Maddox St<br>Alexandria NSW 2015 |
| Telephone | +61 2 8594 0400 |
| Facsimile | +61 2 8594 0499 |
| Email | au.environmental.sydney@sgs.com |
| SGS Reference | **SE272613 R0** |
| Date Received | 16/10/2024 |
| Date Reported | 23/10/2024 |

## COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

## SIGNATORIES

**Akheeqar BENIAMEEN**
Chemist

**Dong LIANG**
Metals/Inorganics Team Leader

**Ly Kim HA**
Organic Section Head

**Shane MCDERMOTT**
Laboratory Manager

**Teresa NGUYEN**
Organic Chemist

**Ying Ying ZHANG**
Laboratory Technician

## VOC's in Soil [AN433] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 |
|---|---|---|---|---|---|---|---|
| Benzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Toluene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethylbenzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| m/p-xylene | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o-xylene | mg/kg | 0.1 | 0.3 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Xylenes* | mg/kg | 0.3 | 0.4 | <0.3 | <0.3 | <0.3 | <0.3 |
| Total BTEX* | mg/kg | 0.6 | <0.6 | <0.6 | <0.6 | <0.6 | <0.6 |
| Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

| PARAMETER | UOM | LOR | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 |
|---|---|---|---|---|---|---|---|
| Benzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Toluene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethylbenzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| m/p-xylene | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o-xylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Xylenes* | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Total BTEX* | mg/kg | 0.6 | <0.6 | <0.6 | <0.6 | <0.6 | <0.6 |
| Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

| PARAMETER | UOM | LOR | DUPLICATE D1 SOIL - 9/10/2024 SE272613.041 | DUPLICATE D2 SOIL - 9/10/2024 SE272613.042 | TRIP BLANK TB1 SOIL - 9/10/2024 SE272613.045 | TRIP SPIKE TS1 SOIL - 9/10/2024 SE272613.046 | TRIP BLANK TB2 SOIL - 10/10/2024 SE272613.047 |
|---|---|---|---|---|---|---|---|
| Benzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | [101%] | <0.1 |
| Toluene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | [98%] | <0.1 |
| Ethylbenzene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | [99%] | <0.1 |
| m/p-xylene | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | [100%] | <0.2 |
| o-xylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | [99%] | <0.1 |
| Total Xylenes* | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | - | <0.3 |
| Total BTEX* | mg/kg | 0.6 | <0.6 | <0.6 | <0.6 | - | <0.6 |
| Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | - | <0.1 |

| PARAMETER | UOM | LOR | TRIP SPIKE TS2 SOIL - 10/10/2024 SE272613.048 |
|---|---|---|---|
| Benzene | mg/kg | 0.1 | [121%] |
| Toluene | mg/kg | 0.1 | [108%] |
| Ethylbenzene | mg/kg | 0.1 | [114%] |
| m/p-xylene | mg/kg | 0.2 | [109%] |
| o-xylene | mg/kg | 0.1 | [111%] |
| Total Xylenes* | mg/kg | 0.3 | - |
| Total BTEX* | mg/kg | 0.6 | - |
| Naphthalene (VOC)* | mg/kg | 0.1 | - |

## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH8 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.009 | BH10 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.012 | BH11 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.014 | BH12 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.015 | BH13 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.016 |
|---|---|---|---|---|---|---|---|
| TRH C6-C9 | mg/kg | 20 | <20 | <20 | <20 | <20 | <20 |
| Benzene (F0) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| TRH C6-C10 | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |

| PARAMETER | UOM | LOR | BH14 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.018 | BH15 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.020 | BH16 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.021 | BH17 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.022 | BH18 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.024 |
|---|---|---|---|---|---|---|---|
| TRH C6-C9 | mg/kg | 20 | <20 | <20 | <20 | <20 | <20 |
| Benzene (F0) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| TRH C6-C10 | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |

| PARAMETER | UOM | LOR | DUPLICATE D1<br>SOIL<br>-<br>9/10/2024<br>SE272613.041 | DUPLICATE D2<br>SOIL<br>-<br>9/10/2024<br>SE272613.042 | TRIP BLANK TB1<br>SOIL<br>-<br>9/10/2024<br>SE272613.045 | TRIP BLANK TB2<br>SOIL<br>-<br>10/10/2024<br>SE272613.047 |
|---|---|---|---|---|---|---|
| TRH C6-C9 | mg/kg | 20 | <20 | <20 | <20 | <20 |
| Benzene (F0) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| TRH C6-C10 | mg/kg | 25 | <25 | <25 | <25 | <25 |
| TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | <25 | <25 | <25 | <25 |

## TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 |
|---|---|---|---|---|---|---|---|
| TRH C10-C14 | mg/kg | 20 | <20 | <20 | <20 | <20 | <20 |
| TRH C15-C28 | mg/kg | 45 | **91** | **62** | **54** | **120** | **61** |
| TRH C29-C36 | mg/kg | 45 | **100** | **87** | **77** | **110** | **74** |
| TRH C37-C40 | mg/kg | 100 | <100 | <100 | <100 | <100 | <100 |
| TRH >C10-C16 | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH >C16-C34 (F3) | mg/kg | 90 | **160** | **120** | **110** | **200** | **110** |
| TRH >C34-C40 (F4) | mg/kg | 120 | <120 | <120 | <120 | <120 | <120 |
| TRH C10-C36 Total | mg/kg | 110 | **190** | **150** | **130** | **230** | **130** |
| TRH >C10-C40 Total (F bands) | mg/kg | 210 | <210 | <210 | <210 | <210 | <210 |

| PARAMETER | UOM | LOR | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 |
|---|---|---|---|---|---|---|---|
| TRH C10-C14 | mg/kg | 20 | <20 | <20 | <20 | <20 | <20 |
| TRH C15-C28 | mg/kg | 45 | **120** | <45 | <45 | <45 | <45 |
| TRH C29-C36 | mg/kg | 45 | **170** | <45 | **54** | **49** | <45 |
| TRH C37-C40 | mg/kg | 100 | <100 | <100 | <100 | <100 | <100 |
| TRH >C10-C16 | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | <25 | <25 | <25 | <25 |
| TRH >C16-C34 (F3) | mg/kg | 90 | **250** | <90 | <90 | <90 | <90 |
| TRH >C34-C40 (F4) | mg/kg | 120 | <120 | <120 | <120 | <120 | <120 |
| TRH C10-C36 Total | mg/kg | 110 | **290** | <110 | <110 | <110 | <110 |
| TRH >C10-C40 Total (F bands) | mg/kg | 210 | **250** | <210 | <210 | <210 | <210 |

| PARAMETER | UOM | LOR | DUPLICATE D1 SOIL - 9/10/2024 SE272613.041 | DUPLICATE D2 SOIL - 9/10/2024 SE272613.042 |
|---|---|---|---|---|
| TRH C10-C14 | mg/kg | 20 | <20 | <20 |
| TRH C15-C28 | mg/kg | 45 | **60** | <45 |
| TRH C29-C36 | mg/kg | 45 | <45 | <45 |
| TRH C37-C40 | mg/kg | 100 | <100 | <100 |
| TRH >C10-C16 | mg/kg | 25 | <25 | <25 |
| TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | <25 |
| TRH >C16-C34 (F3) | mg/kg | 90 | **96** | <90 |
| TRH >C34-C40 (F4) | mg/kg | 120 | <120 | <120 |
| TRH C10-C36 Total | mg/kg | 110 | <110 | <110 |
| TRH >C10-C40 Total (F bands) | mg/kg | 210 | <210 | <210 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 |
|---|---|---|---|---|---|---|---|
| Naphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **0.2** | <0.1 |
| Acenaphthene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **1.0** | <0.1 |
| Anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **0.4** | <0.1 |
| Fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | **0.1** | **4.1** | <0.1 |
| Pyrene | mg/kg | 0.1 | <0.1 | <0.1 | **0.1** | **3.7** | <0.1 |
| Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **1.4** | <0.1 |
| Chrysene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **1.5** | <0.1 |
| Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | **0.1** | **2.0** | <0.1 |
| Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **0.8** | <0.1 |
| Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **2.0** | <0.1 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **1.4** | <0.1 |
| Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **0.1** | <0.1 |
| Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | **1.4** | <0.1 |
| Carcinogenic PAHs, BaP TEQ <LOR=0* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 | <0.2 | **2.7** | <0.2 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR* | TEQ (mg/kg) | 0.3 | <0.3 | <0.3 | <0.3 | **2.7** | <0.3 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 | <0.2 | **2.7** | <0.2 |
| Total PAH (18) | mg/kg | 0.8 | <0.8 | <0.8 | <0.8 | **20** | <0.8 |
| Total PAH (NEPM/WHO 16) | mg/kg | 0.8 | <0.8 | <0.8 | <0.8 | **20** | <0.8 |

| PARAMETER | UOM | LOR | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 |
|---|---|---|---|---|---|---|---|
| Naphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | 0.1 | **0.1** | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | 0.1 | **0.1** | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Carcinogenic PAHs, BaP TEQ <LOR=0* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR* | TEQ (mg/kg) | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Total PAH (18) | mg/kg | 0.8 | <0.8 | <0.8 | <0.8 | <0.8 | <0.8 |
| Total PAH (NEPM/WHO 16) | mg/kg | 0.8 | <0.8 | <0.8 | <0.8 | <0.8 | <0.8 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | DUPLICATE D1<br>SOIL<br>-<br>9/10/2024<br>SE272613.041 | DUPLICATE D2<br>SOIL<br>-<br>9/10/2024<br>SE272613.042 |
|---|---|---|---|---|
| Naphthalene | mg/kg | 0.1 | <0.1 | <0.1 |
| 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 |
| 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | 0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | 0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | 0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | 0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | 0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | 0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | 0.1 | <0.1 | <0.1 |
| Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 |
| Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 |
| Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | <0.1 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | <0.1 |
| Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | <0.1 |
| Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | <0.1 |
| Carcinogenic PAHs, BaP TEQ <LOR=0* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR* | TEQ (mg/kg) | 0.3 | <0.3 | <0.3 |
| Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | TEQ (mg/kg) | 0.2 | <0.2 | <0.2 |
| Total PAH (18) | mg/kg | 0.8 | <0.8 | <0.8 |
| Total PAH (NEPM/WHO 16) | mg/kg | 0.8 | <0.8 | <0.8 |

## OC Pesticides in Soil [AN420] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH1 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.001 | BH2 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.002 | BH3 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.003 | BH4 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.004 | BH5 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.006 |
|---|---|---|---|---|---|---|---|
| Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Endrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mirex | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |
| Total OC VIC EPA | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |

## OC Pesticides in Soil [AN420] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | BH6 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.007 | BH7 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.008 | BH8 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.009 | BH9 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.011 | BH10 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.012 |
|---|---|---|---|---|---|---|---|
| Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Endrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mirex | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |
| Total OC VIC EPA | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |

## OC Pesticides in Soil [AN420] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 |
|---|---|---|---|---|---|---|---|
| Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Endrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mirex | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |
| Total OC VIC EPA | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |

## OC Pesticides in Soil [AN420] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 | DUPLICATE D1 SOIL - 9/10/2024 SE272613.041 | DUPLICATE D2 SOIL - 9/10/2024 SE272613.042 |
|---|---|---|---|---|---|---|---|
| Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Endrin | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mirex | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |
| Total OC VIC EPA | mg/kg | 1 | <1 | <1 | <1 | <1 | <1 |

## PCBs in Soil [AN420] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH18 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.024 | DUPLICATE D2<br>SOIL<br>-<br>9/10/2024<br>SE272613.042 |
|---|---|---|---|---|
| Arochlor 1016 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1221 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1232 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1242 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1248 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1254 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1260 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1262 | mg/kg | 0.2 | <0.2 | <0.2 |
| Arochlor 1268 | mg/kg | 0.2 | <0.2 | <0.2 |
| Total PCBs (Arochlors) | mg/kg | 1 | <1 | <1 |

pH in soil (1:5) [AN101] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH4 0.3-0.4<br>SOIL<br>-<br>10/10/2024<br>SE272613.005 | BH30 0.5-0.6<br>SOIL<br>-<br>10/10/2024<br>SE272613.038 |
|---|---|---|---|---|
| pH | pH Units | 0.1 | **6.1** | **5.0** |

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 23/10/2024

| PARAMETER | UOM | LOR | BH4 0.3-0.4<br>SOIL<br>-<br>10/10/2024<br>SE272613.005 | BH30 0.5-0.6<br>SOIL<br>-<br>10/10/2024<br>SE272613.038 |
|---|---|---|---|---|
| Exchangeable Calcium, Ca | mg/kg | 2 | 240 | 130 |
| Exchangeable Calcium, Ca | meq/100g | 0.01 | 1.2 | 0.64 |
| Exchangeable Calcium Percentage* | % | 0.1 | 75.3 | 57.5 |
| Exchangeable Potassium, K | mg/kg | 2 | 20 | 84 |
| Exchangeable Potassium, K | meq/100g | 0.01 | 0.05 | 0.22 |
| Exchangeable Potassium Percentage* | % | 0.1 | 3.2 | 19.5 |
| Exchangeable Magnesium, Mg | mg/kg | 2 | 34 | 23 |
| Exchangeable Magnesium, Mg | meq/100g | 0.02 | 0.28 | 0.19 |
| Exchangeable Magnesium Percentage* | % | 0.1 | 17.4 | 17.0 |
| Exchangeable Sodium, Na | mg/kg | 2 | 15 | 15 |
| Exchangeable Sodium, Na | meq/100g | 0.01 | 0.07 | 0.07 |
| Exchangeable Sodium Percentage* | % | 0.1 | 4.1 | 6.0 |
| Cation Exchange Capacity | meq/100g | 0.02 | 1.6 | 1.1 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH1 0.0-0.1 SOIL - 10/10/2024 SE272613.001 | BH2 0.0-0.1 SOIL - 10/10/2024 SE272613.002 | BH3 0.0-0.1 SOIL - 10/10/2024 SE272613.003 | BH4 0.0-0.1 SOIL - 10/10/2024 SE272613.004 | BH4 0.3-0.4 SOIL - 10/10/2024 SE272613.005 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 2 | <1 | <1 | 1 | 2 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 5.0 | 3.1 | 3.2 | 4.4 | 13 |
| Copper, Cu | mg/kg | 0.5 | 4.0 | 1.5 | 1.2 | 3.2 | <0.5 |
| Lead, Pb | mg/kg | 1 | 21 | 8 | 7 | 16 | 4 |
| Nickel, Ni | mg/kg | 0.5 | 1.2 | <0.5 | <0.5 | 1.4 | <0.5 |
| Zinc, Zn | mg/kg | 2 | 120 | 35 | 32 | 27 | 4.2 |

| PARAMETER | UOM | LOR | BH5 0.0-0.1 SOIL - 10/10/2024 SE272613.006 | BH6 0.0-0.1 SOIL - 10/10/2024 SE272613.007 | BH7 0.0-0.1 SOIL - 10/10/2024 SE272613.008 | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH8 0.4-0.5 SOIL - 10/10/2024 SE272613.010 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | <1 | <1 | 1 | 2 | 1 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 4.9 | 4.4 | 4.7 | 4.7 | 13 |
| Copper, Cu | mg/kg | 0.5 | 3.3 | 3.2 | 3.3 | 3.9 | <0.5 |
| Lead, Pb | mg/kg | 1 | 86 | 100 | 100 | 14 | 3 |
| Nickel, Ni | mg/kg | 0.5 | <0.5 | <0.5 | 0.7 | 1.3 | <0.5 |
| Zinc, Zn | mg/kg | 2 | 32 | 37 | 36 | 34 | 3.0 |

| PARAMETER | UOM | LOR | BH9 0.0-0.1 SOIL - 10/10/2024 SE272613.011 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH10 0.6-0.7 SOIL - 10/10/2024 SE272613.013 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 1 | 4 | <1 | 4 | 5 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | 0.8 | <0.3 | 1.1 | 0.9 |
| Chromium, Cr | mg/kg | 0.5 | 4.7 | 19 | 8.9 | 30 | 19 |
| Copper, Cu | mg/kg | 0.5 | 2.9 | 230 | 6.8 | 330 | 240 |
| Lead, Pb | mg/kg | 1 | 13 | 880 | 31 | 1300 | 800 |
| Nickel, Ni | mg/kg | 0.5 | 1.0 | 15 | 0.7 | 22 | 14 |
| Zinc, Zn | mg/kg | 2 | 30 | 3400 | 180 | 5400 | 3400 |

| PARAMETER | UOM | LOR | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 | BH13 0.7-0.8 SOIL - 10/10/2024 SE272613.017 | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH14 0.4-0.5 SOIL - 10/10/2024 SE272613.019 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 1 | 1 | 2 | <1 | 1 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 4.5 | 9.1 | 5.0 | 3.9 | 3.6 |
| Copper, Cu | mg/kg | 0.5 | 13 | 5.7 | 12 | 2.6 | 1.9 |
| Lead, Pb | mg/kg | 1 | 64 | 27 | 24 | 10 | 4 |
| Nickel, Ni | mg/kg | 0.5 | 1.2 | 0.9 | 2.2 | 1.2 | 1.0 |
| Zinc, Zn | mg/kg | 2 | 75 | 42 | 73 | 17 | 11 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/10/2024

(continued)

| PARAMETER | UOM | LOR | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH17 0.5-0.6 SOIL - 10/10/2024 SE272613.023 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 | BH18 0.6-0.7 SOIL - 10/10/2024 SE272613.025 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 1 | 1 | <1 | 4 | 2 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 3.1 | 3.0 | 2.6 | 15 | 11 |
| Copper, Cu | mg/kg | 0.5 | 4.7 | 5.1 | 2.3 | 9.9 | 4.4 |
| Lead, Pb | mg/kg | 1 | 14 | 15 | 14 | 13 | 20 |
| Nickel, Ni | mg/kg | 0.5 | 0.9 | 1.0 | 0.6 | 5.1 | 2.5 |
| Zinc, Zn | mg/kg | 2 | 67 | 44 | 42 | 39 | 31 |

| PARAMETER | UOM | LOR | BH19 0.0-0.1 SOIL - 10/10/2024 SE272613.026 | BH20 0.0-0.1 SOIL - 10/10/2024 SE272613.027 | BH21 0.0-0.1 SOIL - 10/10/2024 SE272613.028 | BH22 0.0-0.1 SOIL - 10/10/2024 SE272613.029 | BH23 0.0-0.1 SOIL - 10/10/2024 SE272613.030 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 3 | 3 | 2 | 2 | 2 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 8.2 | 11 | 7.9 | 6.9 | 7.4 |
| Copper, Cu | mg/kg | 0.5 | 8.9 | 4.2 | 2.8 | 2.2 | 2.4 |
| Lead, Pb | mg/kg | 1 | 8 | 8 | 6 | 5 | 5 |
| Nickel, Ni | mg/kg | 0.5 | 2.3 | 3.9 | 0.7 | 0.5 | <0.5 |
| Zinc, Zn | mg/kg | 2 | 18 | 26 | 9.7 | 8.0 | 6.5 |

| PARAMETER | UOM | LOR | BH24 0.0-0.1 SOIL - 10/10/2024 SE272613.031 | BH25 0.0-0.1 SOIL - 10/10/2024 SE272613.032 | BH26 0.0-0.1 SOIL - 10/10/2024 SE272613.033 | BH27 0.0-0.1 SOIL - 10/10/2024 SE272613.034 | BH28 0.0-0.1 SOIL - 10/10/2024 SE272613.035 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 2 | 2 | 2 | 1 | 1 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 8.4 | 5.3 | 5.8 | 7.8 | 7.5 |
| Copper, Cu | mg/kg | 0.5 | 5.7 | 5.6 | 7.0 | 14 | 16 |
| Lead, Pb | mg/kg | 1 | 61 | 110 | 130 | 160 | 21 |
| Nickel, Ni | mg/kg | 0.5 | 1.4 | 1.5 | 1.3 | 1.3 | 1.3 |
| Zinc, Zn | mg/kg | 2 | 61 | 95 | 120 | 39 | 49 |

| PARAMETER | UOM | LOR | BH29 0.0-0.1 SOIL - 10/10/2024 SE272613.036 | BH30 0.0-0.1 SOIL - 10/10/2024 SE272613.037 | BH30 0.5-0.6 SOIL - 10/10/2024 SE272613.038 | BH31 0.0-0.1 SOIL - 10/10/2024 SE272613.039 | BH32 0.0-0.1 SOIL - 10/10/2024 SE272613.040 |
|---|---|---|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | 1 | 1 | 1 | 2 | 2 |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | <0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | 7.6 | 7.8 | 15 | 8.8 | 7.4 |
| Copper, Cu | mg/kg | 0.5 | 9.9 | 11 | 5.6 | 15 | 28 |
| Lead, Pb | mg/kg | 1 | 18 | 19 | 6 | 22 | 37 |
| Nickel, Ni | mg/kg | 0.5 | 1.2 | 1.2 | 1.2 | 2.1 | 1.6 |
| Zinc, Zn | mg/kg | 2 | 35 | 42 | 7.3 | 43 | 100 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/10/2024

(continued)

| PARAMETER | UOM | LOR | DUPLICATE D1<br>SOIL<br>-<br>9/10/2024<br>SE272613.041 | DUPLICATE D2<br>SOIL<br>-<br>9/10/2024<br>SE272613.042 |
|---|---|---|---|---|
| Arsenic, As | mg/kg | 1 | **2** | **2** |
| Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 |
| Chromium, Cr | mg/kg | 0.5 | **12** | **16** |
| Copper, Cu | mg/kg | 0.5 | **12** | **5.9** |
| Lead, Pb | mg/kg | 1 | **14** | **6** |
| Nickel, Ni | mg/kg | 0.5 | **3.3** | **1.3** |
| Zinc, Zn | mg/kg | 2 | **39** | **7.8** |

## Mercury in Soil [AN312] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH1 0.0-0.1 SOIL - 10/10/2024 SE272613.001 | BH2 0.0-0.1 SOIL - 10/10/2024 SE272613.002 | BH3 0.0-0.1 SOIL - 10/10/2024 SE272613.003 | BH4 0.0-0.1 SOIL - 10/10/2024 SE272613.004 | BH4 0.3-0.4 SOIL - 10/10/2024 SE272613.005 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH5 0.0-0.1 SOIL - 10/10/2024 SE272613.006 | BH6 0.0-0.1 SOIL - 10/10/2024 SE272613.007 | BH7 0.0-0.1 SOIL - 10/10/2024 SE272613.008 | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH8 0.4-0.5 SOIL - 10/10/2024 SE272613.010 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH9 0.0-0.1 SOIL - 10/10/2024 SE272613.011 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH10 0.6-0.7 SOIL - 10/10/2024 SE272613.013 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 | BH13 0.7-0.8 SOIL - 10/10/2024 SE272613.017 | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH14 0.4-0.5 SOIL - 10/10/2024 SE272613.019 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH17 0.5-0.6 SOIL - 10/10/2024 SE272613.023 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 | BH18 0.6-0.7 SOIL - 10/10/2024 SE272613.025 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH19 0.0-0.1 SOIL - 10/10/2024 SE272613.026 | BH20 0.0-0.1 SOIL - 10/10/2024 SE272613.027 | BH21 0.0-0.1 SOIL - 10/10/2024 SE272613.028 | BH22 0.0-0.1 SOIL - 10/10/2024 SE272613.029 | BH23 0.0-0.1 SOIL - 10/10/2024 SE272613.030 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

| PARAMETER | UOM | LOR | BH24 0.0-0.1 SOIL - 10/10/2024 SE272613.031 | BH25 0.0-0.1 SOIL - 10/10/2024 SE272613.032 | BH26 0.0-0.1 SOIL - 10/10/2024 SE272613.033 | BH27 0.0-0.1 SOIL - 10/10/2024 SE272613.034 | BH28 0.0-0.1 SOIL - 10/10/2024 SE272613.035 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 | <0.05 | **0.10** | **0.12** |

## Mercury in Soil [AN312] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | BH29 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.036 | BH30 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.037 | BH30 0.5-0.6<br>SOIL<br>-<br>10/10/2024<br>SE272613.038 | BH31 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.039 | BH32 0.0-0.1<br>SOIL<br>-<br>10/10/2024<br>SE272613.040 |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | **0.11** | **0.12** | <0.05 | **0.09** | **0.44** |

| PARAMETER | UOM | LOR | DUPLICATE D1<br>SOIL<br>-<br>9/10/2024<br>SE272613.041 | DUPLICATE D2<br>SOIL<br>-<br>9/10/2024<br>SE272613.042 |
|---|---|---|---|---|
| Mercury | mg/kg | 0.05 | <0.05 | <0.05 |

## Moisture Content [AN002] Tested: 17/10/2024

| PARAMETER | UOM | LOR | BH1 0.0-0.1 SOIL - 10/10/2024 SE272613.001 | BH2 0.0-0.1 SOIL - 10/10/2024 SE272613.002 | BH3 0.0-0.1 SOIL - 10/10/2024 SE272613.003 | BH4 0.0-0.1 SOIL - 10/10/2024 SE272613.004 | BH4 0.3-0.4 SOIL - 10/10/2024 SE272613.005 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 12.2 | 13.8 | 13.7 | 18.4 | 13.5 |

| PARAMETER | UOM | LOR | BH5 0.0-0.1 SOIL - 10/10/2024 SE272613.006 | BH6 0.0-0.1 SOIL - 10/10/2024 SE272613.007 | BH7 0.0-0.1 SOIL - 10/10/2024 SE272613.008 | BH8 0.0-0.1 SOIL - 10/10/2024 SE272613.009 | BH8 0.4-0.5 SOIL - 10/10/2024 SE272613.010 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 12.2 | 13.4 | 12.9 | 19.6 | 13.0 |

| PARAMETER | UOM | LOR | BH9 0.0-0.1 SOIL - 10/10/2024 SE272613.011 | BH10 0.0-0.1 SOIL - 10/10/2024 SE272613.012 | BH10 0.6-0.7 SOIL - 10/10/2024 SE272613.013 | BH11 0.0-0.1 SOIL - 10/10/2024 SE272613.014 | BH12 0.0-0.1 SOIL - 10/10/2024 SE272613.015 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 15.4 | 13.1 | 9.6 | 11.6 | 13.0 |

| PARAMETER | UOM | LOR | BH13 0.0-0.1 SOIL - 10/10/2024 SE272613.016 | BH13 0.7-0.8 SOIL - 10/10/2024 SE272613.017 | BH14 0.0-0.1 SOIL - 10/10/2024 SE272613.018 | BH14 0.4-0.5 SOIL - 10/10/2024 SE272613.019 | BH15 0.0-0.1 SOIL - 10/10/2024 SE272613.020 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 11.1 | 10.1 | 26.8 | 18.2 | 8.0 |

| PARAMETER | UOM | LOR | BH16 0.0-0.1 SOIL - 10/10/2024 SE272613.021 | BH17 0.0-0.1 SOIL - 10/10/2024 SE272613.022 | BH17 0.5-0.6 SOIL - 10/10/2024 SE272613.023 | BH18 0.0-0.1 SOIL - 10/10/2024 SE272613.024 | BH18 0.6-0.7 SOIL - 10/10/2024 SE272613.025 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 9.8 | 8.5 | 6.9 | 15.1 | 17.4 |

| PARAMETER | UOM | LOR | BH19 0.0-0.1 SOIL - 10/10/2024 SE272613.026 | BH20 0.0-0.1 SOIL - 10/10/2024 SE272613.027 | BH21 0.0-0.1 SOIL - 10/10/2024 SE272613.028 | BH22 0.0-0.1 SOIL - 10/10/2024 SE272613.029 | BH23 0.0-0.1 SOIL - 10/10/2024 SE272613.030 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 14.8 | 13.5 | 11.0 | 8.8 | 9.1 |

| PARAMETER | UOM | LOR | BH24 0.0-0.1 SOIL - 10/10/2024 SE272613.031 | BH25 0.0-0.1 SOIL - 10/10/2024 SE272613.032 | BH26 0.0-0.1 SOIL - 10/10/2024 SE272613.033 | BH27 0.0-0.1 SOIL - 10/10/2024 SE272613.034 | BH28 0.0-0.1 SOIL - 10/10/2024 SE272613.035 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 16.5 | 8.0 | 10.3 | 10.6 | 5.8 |

## Moisture Content [AN002] Tested: 17/10/2024 (continued)

| PARAMETER | UOM | LOR | BH29 0.0-0.1 SOIL - 10/10/2024 SE272613.036 | BH30 0.0-0.1 SOIL - 10/10/2024 SE272613.037 | BH30 0.5-0.6 SOIL - 10/10/2024 SE272613.038 | BH31 0.0-0.1 SOIL - 10/10/2024 SE272613.039 | BH32 0.0-0.1 SOIL - 10/10/2024 SE272613.040 |
|---|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 10.2 | 8.4 | 10.6 | 9.3 | 11.2 |

| PARAMETER | UOM | LOR | DUPLICATE D1 SOIL - 9/10/2024 SE272613.041 | DUPLICATE D2 SOIL - 9/10/2024 SE272613.042 | TRIP BLANK TB1 SOIL - 9/10/2024 SE272613.045 | TRIP BLANK TB2 SOIL - 10/10/2024 SE272613.047 |
|---|---|---|---|---|---|---|
| % Moisture | %w/w | 1 | 18.1 | 17.2 | <1.0 | <1.0 |

## Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 21/10/2024

| PARAMETER | UOM | LOR | RINSATE R1<br>WATER<br>-<br>9/10/2024<br>SE272613.043 | RINSATE R2<br>WATER<br>-<br>10/10/2024<br>SE272613.044 |
|---|---|---|---|---|
| Arsenic | µg/L | 1 | <1 | <1 |
| Cadmium | µg/L | 0.1 | <0.1 | <0.1 |
| Copper | µg/L | 1 | <1 | <1 |
| Chromium | µg/L | 1 | <1 | <1 |
| Nickel | µg/L | 1 | <1 | <1 |
| Lead | µg/L | 1 | <1 | <1 |
| Zinc | µg/L | 5 | <5 | <5 |

## Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 17/10/2024

| PARAMETER | UOM | LOR | RINSATE R1<br>WATER<br>-<br>9/10/2024<br>SE272613.043 | RINSATE R2<br>WATER<br>-<br>10/10/2024<br>SE272613.044 |
|---|---|---|---|---|
| Mercury | mg/L | 0.0001 | <0.0001 | <0.0001 |

| METHOD | METHODOLOGY SUMMARY |
|---|---|
| AN002 | The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water. |
| AN020 | Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B. |
| AN040/AN320 | A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C. |
| AN040 | A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8. |
| AN101 | pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+. |
| AN122 | Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g. |
| AN122 | The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.<br>ESP can be used to categorise the sodicity of the soil as below:<br><br>ESP < 6% non-sodic<br>ESP 6-15% sodic<br>ESP >15% strongly sodic<br><br>Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.- |
| AN311(Perth)/AN312 | Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500. |
| AN312 | Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500 |
| AN318 | Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4). |
| AN403 | Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available. |
| AN403 | Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents. |
| AN403 | The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B. |
| AN420 | (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).<br>Total PAH calculated from individual analyte detections at or above the limit of reporting. |
| AN420 | SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). |

| | |
|---|---|
| AN433 | VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260. |

FOOTNOTES

| | | | | | |
|---|---|---|---|---|---|
| * | NATA accreditation does not cover the performance of this service. | - | Not analysed. | UOM | Unit of Measure. |
| | | NVL | Not validated. | LOR | Limit of Reporting. |
| ** | Indicative data, theoretical holding time exceeded. | IS | Insufficient sample for analysis. | ↑↓ | Raised/lowered Limit of Reporting. |
| | | LNR | Sample listed, but not received. | | |
| *** | Indicates that both * and ** apply. | | | | |

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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# STATEMENT OF QA/QC PERFORMANCE

**SE272613 R0**

## CLIENT DETAILS

| | |
|---|---|
| Contact | Mark Kelly |
| Client | GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING |
| Address | PO BOX 398<br>DRUMMOYNE NSW 2164 |
| Telephone | 1300137038 |
| Facsimile | (Not specified) |
| Email | mark.kelly@aargus.net |
| Project | **ES9402/3 Oxford Falls DSI** |
| Order Number | **COD ES9402/3** |
| Samples | 48 |

## LABORATORY DETAILS

| | |
|---|---|
| Manager | Shane McDermott |
| Laboratory | SGS Alexandria Environmental |
| Address | Unit 16, 33 Maddox St<br>Alexandria NSW 2015 |
| Telephone | +61 2 8594 0400 |
| Facsimile | +61 2 8594 0499 |
| Email | au.environmental.sydney@sgs.com |
| SGS Reference | **SE272613 R0** |
| Date Received | 16 Oct 2024 |
| Date Reported | 23 Oct 2024 |

## COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

| | | |
|---|---|---|
| Surrogate | VOC's in Soil | 1 item |
| | Volatile Petroleum Hydrocarbons in Soil | 1 item |
| Duplicate | PAH (Polynuclear Aromatic Hydrocarbons) in Soil | 3 items |
| Matrix Spike | Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES | 1 item |
| | TRH (Total Recoverable Hydrocarbons) in Soil | 2 items |

## SAMPLE SUMMARY

| | | | |
|---|---|---|---|
| Sample counts by matrix | 46 Soil, 2 Water | Type of documentation received | COC |
| Date documentation received | 16/10/2024 | Samples received in good order | Yes |
| Samples received without headspace | Yes | Sample temperature upon receipt | 12.1°C |
| Sample container provider | SGS | Turnaround time requested | Standard |
| Samples received in correct containers | Yes | Sufficient sample for analysis | Yes |
| Sample cooling method | Ice Bricks | Samples clearly labelled | Yes |
| Complete documentation received | Yes | | |

# HOLDING TIME SUMMARY

SE272613 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH4 0.3-0.4 | SE272613.005 | LB327581 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 23 Oct 2024 | 07 Nov 2024 | 23 Oct 2024 |
| BH30 0.5-0.6 | SE272613.038 | LB327581 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 23 Oct 2024 | 07 Nov 2024 | 23 Oct 2024 |

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| RINSATE R1 | SE272613.043 | LB327003 | 09 Oct 2024 | 16 Oct 2024 | 06 Nov 2024 | 17 Oct 2024 | 06 Nov 2024 | 17 Oct 2024 |
| RINSATE R2 | SE272613.044 | LB327003 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 |

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH4 0.3-0.4 | SE272613.005 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH8 0.4-0.5 | SE272613.010 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH10 0.6-0.7 | SE272613.013 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH13 0.7-0.8 | SE272613.017 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH14 0.4-0.5 | SE272613.019 | LB327037 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH17 0.5-0.6 | SE272613.023 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH18 0.6-0.7 | SE272613.025 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH19 0.0-0.1 | SE272613.026 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH20 0.0-0.1 | SE272613.027 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH21 0.0-0.1 | SE272613.028 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH22 0.0-0.1 | SE272613.029 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH23 0.0-0.1 | SE272613.030 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH24 0.0-0.1 | SE272613.031 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH25 0.0-0.1 | SE272613.032 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH26 0.0-0.1 | SE272613.033 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH27 0.0-0.1 | SE272613.034 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH28 0.0-0.1 | SE272613.035 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH29 0.0-0.1 | SE272613.036 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH30 0.0-0.1 | SE272613.037 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH30 0.5-0.6 | SE272613.038 | LB327038 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH31 0.0-0.1 | SE272613.039 | LB327039 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| BH32 0.0-0.1 | SE272613.040 | LB327039 | 10 Oct 2024 | 16 Oct 2024 | 07 Nov 2024 | 17 Oct 2024 | 07 Nov 2024 | 18 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327037 | 09 Oct 2024 | 16 Oct 2024 | 06 Nov 2024 | 17 Oct 2024 | 06 Nov 2024 | 18 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327038 | 09 Oct 2024 | 16 Oct 2024 | 06 Nov 2024 | 17 Oct 2024 | 06 Nov 2024 | 18 Oct 2024 |

## Moisture Content

Method: ME-(AU)-[ENV]AN002

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH4 0.3-0.4 | SE272613.005 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |

# HOLDING TIME SUMMARY

SE272613 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## Moisture Content (continued)

Method: ME-(AU)-[ENV]AN002

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH6 0.0-0.1 | SE272613.007 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH8 0.4-0.5 | SE272613.010 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH10 0.6-0.7 | SE272613.013 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH13 0.7-0.8 | SE272613.017 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH14 0.4-0.5 | SE272613.019 | LB327042 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH17 0.5-0.6 | SE272613.023 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH18 0.6-0.7 | SE272613.025 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH19 0.0-0.1 | SE272613.026 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH20 0.0-0.1 | SE272613.027 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH21 0.0-0.1 | SE272613.028 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH22 0.0-0.1 | SE272613.029 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH23 0.0-0.1 | SE272613.030 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH24 0.0-0.1 | SE272613.031 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH25 0.0-0.1 | SE272613.032 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH26 0.0-0.1 | SE272613.033 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH27 0.0-0.1 | SE272613.034 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH28 0.0-0.1 | SE272613.035 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH29 0.0-0.1 | SE272613.036 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH30 0.0-0.1 | SE272613.037 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH30 0.5-0.6 | SE272613.038 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| BH31 0.0-0.1 | SE272613.039 | LB327044 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 21 Oct 2024 |
| BH32 0.0-0.1 | SE272613.040 | LB327044 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 21 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327042 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327043 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| TRIP BLANK TB1 | SE272613.045 | LB327043 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |
| TRIP BLANK TB2 | SE272613.047 | LB327043 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 22 Oct 2024 | 18 Oct 2024 |

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

# HOLDING TIME SUMMARY

SE272613 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| DUPLICATE D2 | SE272613.042 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 22 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH4 0.3-0.4 | SE272613.005 | LB327086 | 10 Oct 2024 | 16 Oct 2024 | 17 Oct 2024 | 17 Oct 2024 | 18 Oct 2024 | 17 Oct 2024 |
| BH30 0.5-0.6 | SE272613.038 | LB327086 | 10 Oct 2024 | 16 Oct 2024 | 17 Oct 2024 | 17 Oct 2024 | 18 Oct 2024 | 17 Oct 2024 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH4 0.3-0.4 | SE272613.005 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |

# HOLDING TIME SUMMARY

SE272613 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH7 0.0-0.1 | SE272613.008 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH8 0.4-0.5 | SE272613.010 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH10 0.6-0.7 | SE272613.013 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH13 0.7-0.8 | SE272613.017 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH14 0.4-0.5 | SE272613.019 | LB327032 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH17 0.5-0.6 | SE272613.023 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH18 0.6-0.7 | SE272613.025 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH19 0.0-0.1 | SE272613.026 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH20 0.0-0.1 | SE272613.027 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH21 0.0-0.1 | SE272613.028 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH22 0.0-0.1 | SE272613.029 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH23 0.0-0.1 | SE272613.030 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH24 0.0-0.1 | SE272613.031 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH25 0.0-0.1 | SE272613.032 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH26 0.0-0.1 | SE272613.033 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH27 0.0-0.1 | SE272613.034 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH28 0.0-0.1 | SE272613.035 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH29 0.0-0.1 | SE272613.036 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH30 0.0-0.1 | SE272613.037 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH30 0.5-0.6 | SE272613.038 | LB327033 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 |
| BH31 0.0-0.1 | SE272613.039 | LB327034 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 22 Oct 2024 |
| BH32 0.0-0.1 | SE272613.040 | LB327034 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 17 Oct 2024 | 08 Apr 2025 | 22 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327032 | 09 Oct 2024 | 16 Oct 2024 | 07 Apr 2025 | 17 Oct 2024 | 07 Apr 2025 | 21 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327033 | 09 Oct 2024 | 16 Oct 2024 | 07 Apr 2025 | 17 Oct 2024 | 07 Apr 2025 | 21 Oct 2024 |

## Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| RINSATE R1 | SE272613.043 | LB327348 | 09 Oct 2024 | 16 Oct 2024 | 07 Apr 2025 | 21 Oct 2024 | 07 Apr 2025 | 22 Oct 2024 |
| RINSATE R2 | SE272613.044 | LB327348 | 10 Oct 2024 | 16 Oct 2024 | 08 Apr 2025 | 21 Oct 2024 | 08 Apr 2025 | 22 Oct 2024 |

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH1 0.0-0.1 | SE272613.001 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH2 0.0-0.1 | SE272613.002 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH3 0.0-0.1 | SE272613.003 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH4 0.0-0.1 | SE272613.004 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH5 0.0-0.1 | SE272613.006 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH6 0.0-0.1 | SE272613.007 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH7 0.0-0.1 | SE272613.008 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH8 0.0-0.1 | SE272613.009 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH9 0.0-0.1 | SE272613.011 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 23 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327025 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

# HOLDING TIME SUMMARY

SE272613 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| DUPLICATE D1 | SE272613.041 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327025 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 26 Nov 2024 | 21 Oct 2024 |

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH8 0.0-0.1 | SE272613.009 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| TRIP BLANK TB1 | SE272613.045 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| TRIP SPIKE TS1 | SE272613.046 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| TRIP BLANK TB2 | SE272613.047 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| TRIP SPIKE TS2 | SE272613.048 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Name | Sample No. | QC Ref | Sampled | Received | Extraction Due | Extracted | Analysis Due | Analysed |
|---|---|---|---|---|---|---|---|---|
| BH8 0.0-0.1 | SE272613.009 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH10 0.0-0.1 | SE272613.012 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH11 0.0-0.1 | SE272613.014 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH12 0.0-0.1 | SE272613.015 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH13 0.0-0.1 | SE272613.016 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH14 0.0-0.1 | SE272613.018 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH15 0.0-0.1 | SE272613.020 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH16 0.0-0.1 | SE272613.021 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH17 0.0-0.1 | SE272613.022 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| BH18 0.0-0.1 | SE272613.024 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| DUPLICATE D1 | SE272613.041 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| DUPLICATE D2 | SE272613.042 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| TRIP BLANK TB1 | SE272613.045 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 22 Oct 2024 |
| TRIP SPIKE TS1 | SE272613.046 | LB327027 | 09 Oct 2024 | 16 Oct 2024 | 23 Oct 2024 | 17 Oct 2024 | 23 Oct 2024 | 23 Oct 2024 |
| TRIP BLANK TB2 | SE272613.047 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 22 Oct 2024 |
| TRIP SPIKE TS2 | SE272613.048 | LB327027 | 10 Oct 2024 | 16 Oct 2024 | 24 Oct 2024 | 17 Oct 2024 | 24 Oct 2024 | 23 Oct 2024 |

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| Tetrachloro-m-xylene (TCMX) (Surrogate) | BH1 0.0-0.1 | SE272613.001 | % | 60 - 130% | 102 |
| | BH2 0.0-0.1 | SE272613.002 | % | 60 - 130% | 103 |
| | BH3 0.0-0.1 | SE272613.003 | % | 60 - 130% | 99 |
| | BH4 0.0-0.1 | SE272613.004 | % | 60 - 130% | 101 |
| | BH5 0.0-0.1 | SE272613.006 | % | 60 - 130% | 105 |
| | BH6 0.0-0.1 | SE272613.007 | % | 60 - 130% | 97 |
| | BH7 0.0-0.1 | SE272613.008 | % | 60 - 130% | 101 |
| | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 109 |
| | BH9 0.0-0.1 | SE272613.011 | % | 60 - 130% | 107 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 98 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 101 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 96 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 103 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 110 |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 99 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 104 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 99 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 103 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 115 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 99 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| 2-fluorobiphenyl (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 70 - 130% | 90 |
| | BH10 0.0-0.1 | SE272613.012 | % | 70 - 130% | 83 |
| | BH11 0.0-0.1 | SE272613.014 | % | 70 - 130% | 93 |
| | BH12 0.0-0.1 | SE272613.015 | % | 70 - 130% | 89 |
| | BH13 0.0-0.1 | SE272613.016 | % | 70 - 130% | 88 |
| | BH14 0.0-0.1 | SE272613.018 | % | 70 - 130% | 73 |
| | BH15 0.0-0.1 | SE272613.020 | % | 70 - 130% | 94 |
| | BH16 0.0-0.1 | SE272613.021 | % | 70 - 130% | 94 |
| | BH17 0.0-0.1 | SE272613.022 | % | 70 - 130% | 94 |
| | BH18 0.0-0.1 | SE272613.024 | % | 70 - 130% | 91 |
| | DUPLICATE D1 | SE272613.041 | % | 70 - 130% | 74 |
| | DUPLICATE D2 | SE272613.042 | % | 70 - 130% | 93 |
| d14-p-terphenyl (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 70 - 130% | 94 |
| | BH10 0.0-0.1 | SE272613.012 | % | 70 - 130% | 88 |
| | BH11 0.0-0.1 | SE272613.014 | % | 70 - 130% | 96 |
| | BH12 0.0-0.1 | SE272613.015 | % | 70 - 130% | 96 |
| | BH13 0.0-0.1 | SE272613.016 | % | 70 - 130% | 92 |
| | BH14 0.0-0.1 | SE272613.018 | % | 70 - 130% | 86 |
| | BH15 0.0-0.1 | SE272613.020 | % | 70 - 130% | 100 |
| | BH16 0.0-0.1 | SE272613.021 | % | 70 - 130% | 98 |
| | BH17 0.0-0.1 | SE272613.022 | % | 70 - 130% | 96 |
| | BH18 0.0-0.1 | SE272613.024 | % | 70 - 130% | 98 |
| | DUPLICATE D1 | SE272613.041 | % | 70 - 130% | 88 |
| | DUPLICATE D2 | SE272613.042 | % | 70 - 130% | 97 |
| d5-nitrobenzene (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 70 - 130% | 85 |
| | BH10 0.0-0.1 | SE272613.012 | % | 70 - 130% | 80 |
| | BH11 0.0-0.1 | SE272613.014 | % | 70 - 130% | 86 |
| | BH12 0.0-0.1 | SE272613.015 | % | 70 - 130% | 86 |
| | BH13 0.0-0.1 | SE272613.016 | % | 70 - 130% | 84 |
| | BH14 0.0-0.1 | SE272613.018 | % | 70 - 130% | 78 |
| | BH15 0.0-0.1 | SE272613.020 | % | 70 - 130% | 93 |
| | BH16 0.0-0.1 | SE272613.021 | % | 70 - 130% | 93 |
| | BH17 0.0-0.1 | SE272613.022 | % | 70 - 130% | 89 |
| | BH18 0.0-0.1 | SE272613.024 | % | 70 - 130% | 92 |
| | DUPLICATE D1 | SE272613.041 | % | 70 - 130% | 80 |
| | DUPLICATE D2 | SE272613.042 | % | 70 - 130% | 91 |

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

| Parameter | Sample Name | Sample Number | Units |
|---|---|---|---|

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| TCMX (Surrogate) | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 103 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 98 |

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| Bromofluorobenzene (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 93 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 83 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 89 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 89 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 96 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 80 |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 97 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 100 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 89 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 74 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 74 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 73 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 104 |
| | TRIP SPIKE TS1 | SE272613.046 | % | 60 - 130% | 104 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 82 |
| | TRIP SPIKE TS2 | SE272613.048 | % | 60 - 130% | 111 |
| d4-1,2-dichloroethane (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 80 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 66 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 70 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 69 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 80 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 59 ① |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 74 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 81 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 74 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 63 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 64 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 65 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 86 |
| | TRIP SPIKE TS1 | SE272613.046 | % | 60 - 130% | 84 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 76 |
| | TRIP SPIKE TS2 | SE272613.048 | % | 60 - 130% | 90 |
| d8-toluene (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 95 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 90 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 98 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 94 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 99 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 87 |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 105 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 110 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 101 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 84 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 85 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 84 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 110 |
| | TRIP SPIKE TS1 | SE272613.046 | % | 60 - 130% | 111 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 98 |
| | TRIP SPIKE TS2 | SE272613.048 | % | 60 - 130% | 119 |

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| Bromofluorobenzene (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 93 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 83 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 89 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 89 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 96 |

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

**Volatile Petroleum Hydrocarbons in Soil (continued)** — **Method: ME-(AU)-[ENV]AN433**

| Parameter | Sample Name | Sample Number | Units | Criteria | Recovery % |
|---|---|---|---|---|---|
| Bromofluorobenzene (Surrogate) | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 80 |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 97 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 100 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 89 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 74 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 74 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 73 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 104 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 82 |
| d4-1,2-dichloroethane (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 80 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 66 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 70 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 69 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 80 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 59 ① |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 74 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 81 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 74 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 63 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 64 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 65 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 86 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 76 |
| d8-toluene (Surrogate) | BH8 0.0-0.1 | SE272613.009 | % | 60 - 130% | 95 |
| | BH10 0.0-0.1 | SE272613.012 | % | 60 - 130% | 90 |
| | BH11 0.0-0.1 | SE272613.014 | % | 60 - 130% | 98 |
| | BH12 0.0-0.1 | SE272613.015 | % | 60 - 130% | 94 |
| | BH13 0.0-0.1 | SE272613.016 | % | 60 - 130% | 99 |
| | BH14 0.0-0.1 | SE272613.018 | % | 60 - 130% | 87 |
| | BH15 0.0-0.1 | SE272613.020 | % | 60 - 130% | 105 |
| | BH16 0.0-0.1 | SE272613.021 | % | 60 - 130% | 110 |
| | BH17 0.0-0.1 | SE272613.022 | % | 60 - 130% | 101 |
| | BH18 0.0-0.1 | SE272613.024 | % | 60 - 130% | 84 |
| | DUPLICATE D1 | SE272613.041 | % | 60 - 130% | 85 |
| | DUPLICATE D2 | SE272613.042 | % | 60 - 130% | 84 |
| | TRIP BLANK TB1 | SE272613.045 | % | 60 - 130% | 110 |
| | TRIP BLANK TB2 | SE272613.047 | % | 60 - 130% | 98 |

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327581.001 | Exchangeable Sodium, Na | mg/kg | 2 | 0 |
| | Exchangeable Potassium, K | mg/kg | 2 | 0.1366 |
| | Exchangeable Calcium, Ca | mg/kg | 2 | 0.0325 |
| | Exchangeable Magnesium, Mg | mg/kg | 2 | 0.0081 |

### Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327003.001 | Mercury | mg/L | 0.0001 | <0.0001 |

### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327037.001 | Mercury | mg/kg | 0.05 | <0.05 |
| LB327038.001 | Mercury | mg/kg | 0.05 | <0.05 |
| LB327039.001 | Mercury | mg/kg | 0.05 | <0.05 |

### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | | Parameter | Units | LOR | Result |
|---|---|---|---|---|---|
| LB327025.001 | | Alpha BHC | mg/kg | 0.1 | <0.1 |
| | | Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 |
| | | Beta BHC | mg/kg | 0.1 | <0.1 |
| | | Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 |
| | | Delta BHC | mg/kg | 0.1 | <0.1 |
| | | Heptachlor | mg/kg | 0.1 | <0.1 |
| | | Aldrin | mg/kg | 0.1 | <0.1 |
| | | Isodrin | mg/kg | 0.1 | <0.1 |
| | | Heptachlor epoxide | mg/kg | 0.1 | <0.1 |
| | | Gamma Chlordane | mg/kg | 0.1 | <0.1 |
| | | Alpha Chlordane | mg/kg | 0.1 | <0.1 |
| | | Alpha Endosulfan | mg/kg | 0.2 | <0.2 |
| | | p,p'-DDE | mg/kg | 0.1 | <0.1 |
| | | Dieldrin | mg/kg | 0.2 | <0.2 |
| | | Endrin | mg/kg | 0.2 | <0.2 |
| | | Beta Endosulfan | mg/kg | 0.2 | <0.2 |
| | | p,p'-DDD | mg/kg | 0.1 | <0.1 |
| | | Endrin aldehyde | mg/kg | 0.1 | <0.1 |
| | | Endosulfan sulphate | mg/kg | 0.1 | <0.1 |
| | | p,p'-DDT | mg/kg | 0.1 | <0.1 |
| | | Endrin ketone | mg/kg | 0.1 | <0.1 |
| | | Methoxychlor | mg/kg | 0.1 | <0.1 |
| | | Mirex | mg/kg | 0.1 | <0.1 |
| | Surrogates | Tetrachloro-m-xylene (TCMX) (Surrogate) | % | - | 100 |

### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327025.001 | Naphthalene | mg/kg | 0.1 | <0.1 |
| | 2-methylnaphthalene | mg/kg | 0.1 | <0.1 |
| | 1-methylnaphthalene | mg/kg | 0.1 | <0.1 |
| | Acenaphthylene | mg/kg | 0.1 | <0.1 |
| | Acenaphthene | mg/kg | 0.1 | <0.1 |
| | Fluorene | mg/kg | 0.1 | <0.1 |
| | Phenanthrene | mg/kg | 0.1 | <0.1 |
| | Anthracene | mg/kg | 0.1 | <0.1 |
| | Fluoranthene | mg/kg | 0.1 | <0.1 |
| | Pyrene | mg/kg | 0.1 | <0.1 |
| | Benzo(a)anthracene | mg/kg | 0.1 | <0.1 |
| | Chrysene | mg/kg | 0.1 | <0.1 |
| | Benzo(a)pyrene | mg/kg | 0.1 | <0.1 |
| | Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 |
| | Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 |
| | Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 |
| | Total PAH (18) | mg/kg | 0.8 | <0.8 |

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| Sample Number | | Parameter | Units | LOR | Result |
|---|---|---|---|---|---|
| LB327025.001 | Surrogates | d5-nitrobenzene (Surrogate) | % | - | 94 |
| | | 2-fluorobiphenyl (Surrogate) | % | - | 93 |
| | | d14-p-terphenyl (Surrogate) | % | - | 100 |

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | | Parameter | Units | LOR | Result |
|---|---|---|---|---|---|
| LB327025.001 | | Arochlor 1016 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1221 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1232 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1242 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1248 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1254 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1260 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1262 | mg/kg | 0.2 | <0.2 |
| | | Arochlor 1268 | mg/kg | 0.2 | <0.2 |
| | | Total PCBs (Arochlors) | mg/kg | 1 | <1 |
| | Surrogates | TCMX (Surrogate) | % | - | 100 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327032.001 | Arsenic, As | mg/kg | 1 | <1 |
| | Cadmium, Cd | mg/kg | 0.3 | <0.3 |
| | Chromium, Cr | mg/kg | 0.5 | <0.5 |
| | Copper, Cu | mg/kg | 0.5 | <0.5 |
| | Nickel, Ni | mg/kg | 0.5 | <0.5 |
| | Lead, Pb | mg/kg | 1 | <1 |
| | Zinc, Zn | mg/kg | 2 | <2.0 |
| LB327033.001 | Arsenic, As | mg/kg | 1 | <1 |
| | Cadmium, Cd | mg/kg | 0.3 | <0.3 |
| | Chromium, Cr | mg/kg | 0.5 | <0.5 |
| | Copper, Cu | mg/kg | 0.5 | <0.5 |
| | Nickel, Ni | mg/kg | 0.5 | <0.5 |
| | Lead, Pb | mg/kg | 1 | <1 |
| | Zinc, Zn | mg/kg | 2 | <2.0 |
| LB327034.001 | Arsenic, As | mg/kg | 1 | <1 |
| | Cadmium, Cd | mg/kg | 0.3 | <0.3 |
| | Chromium, Cr | mg/kg | 0.5 | <0.5 |
| | Copper, Cu | mg/kg | 0.5 | <0.5 |
| | Nickel, Ni | mg/kg | 0.5 | <0.5 |
| | Lead, Pb | mg/kg | 1 | <1 |
| | Zinc, Zn | mg/kg | 2 | <2.0 |

## Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327348.001 | Arsenic | µg/L | 1 | <1 |
| | Cadmium | µg/L | 0.1 | <0.1 |
| | Chromium | µg/L | 1 | <1 |
| | Copper | µg/L | 1 | <1 |
| | Lead | µg/L | 1 | <1 |
| | Nickel | µg/L | 1 | <1 |
| | Zinc | µg/L | 5 | <5 |

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

| Sample Number | Parameter | Units | LOR | Result |
|---|---|---|---|---|
| LB327025.001 | TRH C10-C14 | mg/kg | 20 | <20 |
| | TRH C15-C28 | mg/kg | 45 | <45 |
| | TRH C29-C36 | mg/kg | 45 | <45 |
| | TRH C37-C40 | mg/kg | 100 | <100 |
| | TRH C10-C36 Total | mg/kg | 110 | <110 |

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Number | Parameter | Units | LOR |
|---|---|---|---|

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

| Sample Number | | Parameter | Units | LOR | Result |
|---|---|---|---|---|---|
| LB327027.001 | Monocyclic Aromatic Hydrocarbons | Benzene | mg/kg | 0.1 | <0.1 |
| | | Toluene | mg/kg | 0.1 | <0.1 |
| | | Ethylbenzene | mg/kg | 0.1 | <0.1 |
| | | m/p-xylene | mg/kg | 0.2 | <0.2 |
| | | o-xylene | mg/kg | 0.1 | <0.1 |
| | Polycyclic VOCs | Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 |
| | Surrogates | d4-1,2-dichloroethane (Surrogate) | % | - | 82 |
| | | d8-toluene (Surrogate) | % | - | 104 |
| | | Bromofluorobenzene (Surrogate) | % | - | 122 |
| | Totals | Total BTEX* | mg/kg | 0.6 | <0.6 |

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Number | | Parameter | Units | LOR | Result |
|---|---|---|---|---|---|
| LB327027.001 | | TRH C6-C9 | mg/kg | 20 | <20 |
| | Surrogates | d4-1,2-dichloroethane (Surrogate) | % | - | 82 |

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272613.044 | LB327003.020 | Mercury | µg/L | 0.0001 | <0.0001 | <0.0001 | 147 | 0 |

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272558.013 | LB327039.014 | Mercury | mg/kg | 0.05 | <0.05 | <0.05 | 200 | 0 |
| SE272613.010 | LB327037.014 | Mercury | mg/kg | 0.05 | <0.05 | <0.05 | 200 | 0 |
| SE272613.029 | LB327038.014 | Mercury | mg/kg | 0.05 | <0.05 | <0.05 | 200 | 0 |
| SE272613.040 | LB327039.017 | Mercury | mg/kg | 0.05 | 0.44 | 0.37 | 42 | 18 |

## Moisture Content

Method: ME-(AU)-[ENV]AN002

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272558.013 | LB327044.011 | % Moisture | %w/w | 1 | 8.2 | 8.8 | 42 | 7 |
| SE272613.010 | LB327042.011 | % Moisture | %w/w | 1 | 13.0 | 13.3 | 38 | 2 |
| SE272613.029 | LB327043.011 | % Moisture | %w/w | 1 | 8.8 | 9.3 | 41 | 5 |
| SE272613.040 | LB327044.014 | % Moisture | %w/w | 1 | 11.2 | 12.2 | 39 | 9 |
| SE272613.041 | LB327042.022 | % Moisture | %w/w | 1 | 18.1 | 18.4 | 35 | 2 |
| SE272613.042 | LB327043.022 | % Moisture | %w/w | 1 | 17.2 | 17.4 | 36 | 1 |

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.012 | LB327025.014 | | Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Endrin | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Mirex | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | 200 | 0 |
| | | | Total OC VIC EPA | mg/kg | 1 | <1 | <1 | 200 | 0 |
| | | Surrogates | Tetrachloro-m-xylene (TCMX) (Surrogate) | mg/kg | - | 0.15 | 0.16 | 30 | 6 |
| SE272613.042 | LB327025.025 | | Alpha BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Beta BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Delta BHC | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Heptachlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Aldrin | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Isodrin | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Heptachlor epoxide | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Gamma Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.042 | LB327025.025 | | Alpha Chlordane | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Alpha Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o,p'-DDE* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDE | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Dieldrin | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Endrin | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Beta Endosulfan | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o,p'-DDD* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDD | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endrin aldehyde | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endosulfan sulphate | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | o,p'-DDT* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | p,p'-DDT | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Endrin ketone | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Methoxychlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Mirex | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | trans-Nonachlor | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Total CLP OC Pesticides | mg/kg | 1 | <1 | <1 | 200 | 0 |
| | | | Total OC VIC EPA | mg/kg | 1 | <1 | <1 | 200 | 0 |
| | | Surrogates | Tetrachloro-m-xylene (TCMX) (Surrogate) | mg/kg | - | 0.15 | 0.16 | 30 | 6 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.012 | LB327025.014 | | Naphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Acenaphthylene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Acenaphthene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Fluorene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Phenanthrene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Anthracene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | 172 | 0 |
| | | | Pyrene | mg/kg | 0.1 | <0.1 | <0.1 | 170 | 0 |
| | | | Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Chrysene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=0* | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | mg/kg | 0.2 | <0.2 | <0.2 | 175 | 0 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR* | mg/kg | 0.3 | <0.3 | <0.3 | 134 | 0 |
| | | | Total PAH (18) | mg/kg | 0.8 | <0.8 | <0.8 | 200 | 0 |
| | | Surrogates | d5-nitrobenzene (Surrogate) | mg/kg | - | 0.4 | 0.4 | 30 | 7 |
| | | | 2-fluorobiphenyl (Surrogate) | mg/kg | - | 0.4 | 0.4 | 30 | 6 |
| | | | d14-p-terphenyl (Surrogate) | mg/kg | - | 0.4 | 0.5 | 30 | 6 |
| SE272613.042 | LB327025.025 | | Naphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Acenaphthylene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Acenaphthene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Fluorene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Phenanthrene | mg/kg | 0.1 | <0.1 | 0.2 | 131 | 51 |
| | | | Anthracene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Fluoranthene | mg/kg | 0.1 | <0.1 | 0.3 | 80 | 107 ② |
| | | | Pyrene | mg/kg | 0.1 | <0.1 | 0.3 | 84 | 99 ② |
| | | | Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | 0.1 | 148 | 32 |
| | | | Chrysene | mg/kg | 0.1 | <0.1 | 0.1 | 140 | 37 |
| | | | Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | 0.2 | 126 | 45 |

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.042 | LB327025.025 | | Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | 0.2 | 126 | 48 |
| | | | Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | <0.1 | 196 | 0 |
| | | | Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | <0.1 | 189 | 0 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=0* | mg/kg | 0.2 | <0.2 | 0.2 | 200 | 1 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | mg/kg | 0.2 | <0.2 | 0.3 | 116 | 25 |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR* | mg/kg | 0.3 | <0.3 | 0.3 | 118 | 4 |
| | | | Total PAH (18) | mg/kg | 0.8 | <0.8 | 1.5 | 44 | 175 ② |
| | | Surrogates | d5-nitrobenzene (Surrogate) | mg/kg | - | 0.5 | 0.5 | 30 | 11 |
| | | | 2-fluorobiphenyl (Surrogate) | mg/kg | - | 0.5 | 0.5 | 30 | 9 |
| | | | d14-p-terphenyl (Surrogate) | mg/kg | - | 0.5 | 0.5 | 30 | 10 |

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.042 | LB327025.025 | | Arochlor 1016 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1221 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1232 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1242 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1248 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1254 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1260 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1262 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Arochlor 1268 | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | Total PCBs (Arochlors) | mg/kg | 1 | <1 | <1 | 200 | 0 |
| | | Surrogates | TCMX (Surrogate) | mg/kg | - | 0 | 0 | 30 | 6 |

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272624.002 | LB327086.014 | pH | pH Units | 0.1 | 5.0 | 4.9 | 32 | 1 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272558.013 | LB327034.014 | Arsenic, As | mg/kg | 1 | 7 | 6 | 45 | 27 |
| | | Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |
| | | Chromium, Cr | mg/kg | 0.5 | 5.4 | 4.8 | 40 | 13 |
| | | Copper, Cu | mg/kg | 0.5 | 10 | 8.6 | 35 | 15 |
| | | Nickel, Ni | mg/kg | 0.5 | 10 | 9.1 | 35 | 10 |
| | | Lead, Pb | mg/kg | 1 | 5 | 6 | 48 | 7 |
| | | Zinc, Zn | mg/kg | 2 | 39 | 34 | 36 | 15 |
| SE272613.010 | LB327032.014 | Arsenic, As | mg/kg | 1 | 1 | 1 | 101 | 3 |
| | | Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |
| | | Chromium, Cr | mg/kg | 0.5 | 13 | 12 | 34 | 3 |
| | | Copper, Cu | mg/kg | 0.5 | <0.5 | <0.5 | 200 | 0 |
| | | Nickel, Ni | mg/kg | 0.5 | <0.5 | <0.5 | 200 | 0 |
| | | Lead, Pb | mg/kg | 1 | 3 | 3 | 62 | 2 |
| | | Zinc, Zn | mg/kg | 2 | 3.0 | 2.9 | 98 | 1 |
| SE272613.029 | LB327033.014 | Arsenic, As | mg/kg | 1 | 2 | 1 | 102 | 34 |
| | | Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |
| | | Chromium, Cr | mg/kg | 0.5 | 6.9 | 6.5 | 37 | 5 |
| | | Copper, Cu | mg/kg | 0.5 | 2.2 | 1.7 | 56 | 29 |
| | | Nickel, Ni | mg/kg | 0.5 | 0.5 | <0.5 | 135 | 3 |
| | | Lead, Pb | mg/kg | 1 | 5 | 4 | 52 | 10 |
| | | Zinc, Zn | mg/kg | 2 | 8.0 | 5.9 | 59 | 30 |
| SE272613.040 | LB327034.017 | Arsenic, As | mg/kg | 1 | 2 | 2 | 84 | 18 |
| | | Cadmium, Cd | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |
| | | Chromium, Cr | mg/kg | 0.5 | 7.4 | 7.9 | 37 | 6 |
| | | Copper, Cu | mg/kg | 0.5 | 28 | 34 | 32 | 18 |
| | | Nickel, Ni | mg/kg | 0.5 | 1.6 | 2.3 | 55 | 33 |
| | | Lead, Pb | mg/kg | 1 | 37 | 50 | 32 | 29 |

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272613.040 | LB327034.017 | Zinc, Zn | mg/kg | 2 | 100 | 130 | 32 | 24 |

## Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

| Original | Duplicate | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|
| SE272575.006 | LB327348.014 | Arsenic | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Cadmium | µg/L | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Chromium | µg/L | 1 | 2 | 2 | 77 | 0 |
| | | Copper | µg/L | 1 | <1 | <1 | 156 | 0 |
| | | Lead | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Nickel | µg/L | 1 | 2 | 2 | 65 | 0 |
| | | Zinc | µg/L | 5 | <5 | <5 | 200 | 0 |
| SE272613.044 | LB327348.028 | Arsenic | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Cadmium | µg/L | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Chromium | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Copper | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Lead | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Nickel | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Zinc | µg/L | 5 | <5 | <5 | 200 | 0 |
| SE272762.021 | LB327348.029 | Arsenic | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Cadmium | µg/L | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Chromium | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Copper | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Lead | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Nickel | µg/L | 1 | <1 | <1 | 200 | 0 |
| | | Zinc | µg/L | 5 | <5 | 5 | 200 | 2 |

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.012 | LB327025.014 | | TRH C10-C14 | mg/kg | 20 | <20 | <20 | 200 | 0 |
| | | | TRH C15-C28 | mg/kg | 45 | 62 | 72 | 97 | 15 |
| | | | TRH C29-C36 | mg/kg | 45 | 87 | 91 | 81 | 4 |
| | | | TRH C37-C40 | mg/kg | 100 | <100 | <100 | 200 | 0 |
| | | | TRH C10-C36 Total | mg/kg | 110 | 150 | 160 | 100 | 9 |
| | | | TRH >C10-C40 Total (F bands) | mg/kg | 210 | <210 | <210 | 194 | 0 |
| | | TRH F Bands | TRH >C10-C16 | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH >C16-C34 (F3) | mg/kg | 90 | 120 | 130 | 100 | 9 |
| | | | TRH >C34-C40 (F4) | mg/kg | 120 | <120 | <120 | 200 | 0 |
| SE272613.042 | LB327025.025 | | TRH C10-C14 | mg/kg | 20 | <20 | <20 | 200 | 0 |
| | | | TRH C15-C28 | mg/kg | 45 | <45 | <45 | 200 | 0 |
| | | | TRH C29-C36 | mg/kg | 45 | <45 | <45 | 136 | 0 |
| | | | TRH C37-C40 | mg/kg | 100 | <100 | <100 | 200 | 0 |
| | | | TRH C10-C36 Total | mg/kg | 110 | <110 | <110 | 200 | 0 |
| | | | TRH >C10-C40 Total (F bands) | mg/kg | 210 | <210 | <210 | 200 | 0 |
| | | TRH F Bands | TRH >C10-C16 | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH >C16-C34 (F3) | mg/kg | 90 | <90 | <90 | 180 | 0 |
| | | | TRH >C34-C40 (F4) | mg/kg | 120 | <120 | <120 | 200 | 0 |

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.024 | LB327027.014 | Monocyclic | Benzene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Aromatic | Toluene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Ethylbenzene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | m/p-xylene | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o-xylene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Polycyclic | Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 6.3 | 7.3 | 50 | 14 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 8.4 | 9.6 | 50 | 13 |
| | | | Bromofluorobenzene (Surrogate) | mg/kg | - | 7.4 | 8.5 | 50 | 13 |
| | | Totals | Total BTEX* | mg/kg | 0.6 | <0.6 | <0.6 | 200 | 0 |
| | | | Total Xylenes* | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.042 | LB327027.024 | Monocyclic Aromatic | Benzene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Toluene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | Ethylbenzene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | m/p-xylene | mg/kg | 0.2 | <0.2 | <0.2 | 200 | 0 |
| | | | o-xylene | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Polycyclic | Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 6.5 | 6.5 | 50 | 0 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 8.4 | 8.2 | 50 | 2 |
| | | | Bromofluorobenzene (Surrogate) | mg/kg | - | 7.3 | 7.2 | 50 | 2 |
| | | Totals | Total BTEX* | mg/kg | 0.6 | <0.6 | <0.6 | 200 | 0 |
| | | | Total Xylenes* | mg/kg | 0.3 | <0.3 | <0.3 | 200 | 0 |

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| Original | Duplicate | | Parameter | Units | LOR | Original | Duplicate | Criteria % | RPD % |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.024 | LB327027.014 | | TRH C6-C10 | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH C6-C9 | mg/kg | 20 | <20 | <20 | 200 | 0 |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 6.3 | 7.3 | 50 | 14 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 8.4 | 9.6 | 50 | 13 |
| | | | Bromofluorobenzene (Surrogate) | mg/kg | - | 7.4 | 8.5 | 50 | 13 |
| | | VPH F Bands | Benzene (F0) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | <25 | <25 | 200 | 0 |
| SE272613.042 | LB327027.023 | | TRH C6-C10 | mg/kg | 25 | <25 | <25 | 200 | 0 |
| | | | TRH C6-C9 | mg/kg | 20 | <20 | <20 | 200 | 0 |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 6.5 | 6.5 | 50 | 0 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 8.4 | 8.2 | 50 | 2 |
| | | | Bromofluorobenzene (Surrogate) | mg/kg | - | 7.3 | 7.2 | 50 | 2 |
| | | VPH F Bands | Benzene (F0) | mg/kg | 0.1 | <0.1 | <0.1 | 200 | 0 |
| | | | TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | <25 | <25 | 200 | 0 |

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

| Sample Number | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|
| LB327581.002 | Exchangeable Sodium, Na | meq/100g | 0.01 | 0.19 | 0.188 | 80 - 120 | 98 |
| | Exchangeable Potassium, K | meq/100g | 0.01 | 0.14 | 0.141 | 80 - 120 | 100 |
| | Exchangeable Calcium, Ca | meq/100g | 0.01 | 2.0 | 2.17 | 80 - 120 | 94 |
| | Exchangeable Magnesium, Mg | meq/100g | 0.02 | 1.4 | 1.53 | 80 - 120 | 92 |

### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

| Sample Number | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|
| LB327037.002 | Mercury | mg/kg | 0.05 | 0.20 | 0.2 | 80 - 120 | 98 |
| LB327038.002 | Mercury | mg/kg | 0.05 | 0.19 | 0.2 | 80 - 120 | 95 |
| LB327039.002 | Mercury | mg/kg | 0.05 | 0.18 | 0.2 | 80 - 120 | 91 |

### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327025.002 | | Delta BHC | mg/kg | 0.1 | 0.2 | 0.2 | 60 - 140 | 94 |
| | | Heptachlor | mg/kg | 0.1 | 0.2 | 0.2 | 60 - 140 | 90 |
| | | Aldrin | mg/kg | 0.1 | 0.2 | 0.2 | 60 - 140 | 96 |
| | | Dieldrin | mg/kg | 0.2 | <0.2 | 0.2 | 60 - 140 | 92 |
| | | Endrin | mg/kg | 0.2 | 0.2 | 0.2 | 60 - 140 | 105 |
| | | p,p'-DDT | mg/kg | 0.1 | 0.2 | 0.2 | 60 - 140 | 100 |
| | Surrogates | Tetrachloro-m-xylene (TCMX) (Surrogate) | mg/kg | - | 0.14 | 0.15 | 40 - 130 | 96 |

### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327025.002 | | Naphthalene | mg/kg | 0.1 | 3.7 | 4 | 60 - 140 | 92 |
| | | Acenaphthylene | mg/kg | 0.1 | 3.7 | 4 | 60 - 140 | 93 |
| | | Acenaphthene | mg/kg | 0.1 | 3.7 | 4 | 60 - 140 | 92 |
| | | Phenanthrene | mg/kg | 0.1 | 4.0 | 4 | 60 - 140 | 101 |
| | | Anthracene | mg/kg | 0.1 | 4.2 | 4 | 60 - 140 | 106 |
| | | Fluoranthene | mg/kg | 0.1 | 3.9 | 4 | 60 - 140 | 97 |
| | | Pyrene | mg/kg | 0.1 | 4.2 | 4 | 60 - 140 | 105 |
| | | Benzo(a)pyrene | mg/kg | 0.1 | 4.5 | 4 | 60 - 140 | 112 |
| | Surrogates | d5-nitrobenzene (Surrogate) | mg/kg | - | 0.4 | 0.5 | 70 - 130 | 88 |
| | | 2-fluorobiphenyl (Surrogate) | mg/kg | - | 0.5 | 0.5 | 70 - 130 | 92 |
| | | d14-p-terphenyl (Surrogate) | mg/kg | - | 0.5 | 0.5 | 70 - 130 | 100 |

### PCBs in Soil

Method: ME-(AU)-[ENV]AN420

| Sample Number | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|
| LB327025.002 | Arochlor 1260 | mg/kg | 0.2 | 0.4 | 0.4 | 60 - 140 | 105 |

### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

| Sample Number | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|
| LB327086.003 | pH | pH Units | 0.1 | 7.5 | 7.415 | 98 - 102 | 101 |

### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

| Sample Number | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|
| LB327032.002 | Arsenic, As | mg/kg | 1 | 320 | 318.22 | 80 - 120 | 102 |
| | Cadmium, Cd | mg/kg | 0.3 | 4.3 | 4.81 | 70 - 130 | 89 |
| | Chromium, Cr | mg/kg | 0.5 | 36 | 38.31 | 80 - 120 | 93 |
| | Copper, Cu | mg/kg | 0.5 | 300 | 290 | 80 - 120 | 103 |
| | Nickel, Ni | mg/kg | 0.5 | 190 | 187 | 80 - 120 | 100 |
| | Lead, Pb | mg/kg | 1 | 92 | 89.9 | 80 - 120 | 102 |
| | Zinc, Zn | mg/kg | 2 | 280 | 273 | 80 - 120 | 101 |
| LB327033.002 | Arsenic, As | mg/kg | 1 | 350 | 318.22 | 80 - 120 | 109 |
| | Cadmium, Cd | mg/kg | 0.3 | 6.1 | 4.81 | 70 - 130 | 126 |
| | Chromium, Cr | mg/kg | 0.5 | 45 | 38.31 | 80 - 120 | 118 |
| | Copper, Cu | mg/kg | 0.5 | 310 | 290 | 80 - 120 | 108 |
| | Nickel, Ni | mg/kg | 0.5 | 200 | 187 | 80 - 120 | 105 |
| | Lead, Pb | mg/kg | 1 | 95 | 89.9 | 80 - 120 | 106 |
| | Zinc, Zn | mg/kg | 2 | 290 | 273 | 80 - 120 | 106 |
| LB327034.002 | Arsenic, As | mg/kg | 1 | 350 | 318.22 | 80 - 120 | 111 |

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327034.002 | | Cadmium, Cd | mg/kg | 0.3 | 6.1 | 4.81 | 70 - 130 | 127 |
| | | Chromium, Cr | mg/kg | 0.5 | 45 | 38.31 | 80 - 120 | 118 |
| | | Copper, Cu | mg/kg | 0.5 | 310 | 290 | 80 - 120 | 108 |
| | | Nickel, Ni | mg/kg | 0.5 | 200 | 187 | 80 - 120 | 106 |
| | | Lead, Pb | mg/kg | 1 | 96 | 89.9 | 80 - 120 | 107 |
| | | Zinc, Zn | mg/kg | 2 | 290 | 273 | 80 - 120 | 106 |

### Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327348.002 | | Arsenic | µg/L | 1 | 22 | 20 | 80 - 120 | 108 |
| | | Cadmium | µg/L | 0.1 | 22 | 20 | 80 - 120 | 110 |
| | | Chromium | µg/L | 1 | 24 | 20 | 80 - 120 | 118 |
| | | Copper | µg/L | 1 | 24 | 20 | 80 - 120 | 119 |
| | | Lead | µg/L | 1 | 24 | 20 | 80 - 120 | 119 |
| | | Nickel | µg/L | 1 | 23 | 20 | 80 - 120 | 116 |
| | | Zinc | µg/L | 5 | 23 | 20 | 80 - 120 | 114 |

### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327025.002 | | TRH C10-C14 | mg/kg | 20 | 49 | 40 | 60 - 140 | 122 |
| | | TRH C15-C28 | mg/kg | 45 | 49 | 40 | 60 - 140 | 123 |
| | | TRH C29-C36 | mg/kg | 45 | <45 | 40 | 60 - 140 | 91 |
| | TRH F Bands | TRH >C10-C16 | mg/kg | 25 | 49 | 40 | 60 - 140 | 122 |
| | | TRH >C16-C34 (F3) | mg/kg | 90 | <90 | 40 | 60 - 140 | 109 |
| | | TRH >C34-C40 (F4) | mg/kg | 120 | <120 | 20 | 60 - 140 | 91 |

### VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327027.002 | Monocyclic | Benzene | mg/kg | 0.1 | 4.2 | 5 | 60 - 140 | 85 |
| | Aromatic | Toluene | mg/kg | 0.1 | 4.4 | 5 | 60 - 140 | 88 |
| | | Ethylbenzene | mg/kg | 0.1 | 4.1 | 5 | 60 - 140 | 82 |
| | | m/p-xylene | mg/kg | 0.2 | 7.5 | 10 | 60 - 140 | 75 |
| | | o-xylene | mg/kg | 0.1 | 4.0 | 5 | 60 - 140 | 80 |

### Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| Sample Number | | Parameter | Units | LOR | Result | Expected | Criteria % | Recovery % |
|---|---|---|---|---|---|---|---|---|
| LB327027.002 | | TRH C6-C10 | mg/kg | 25 | 81 | 92.5 | 60 - 140 | 88 |
| | | TRH C6-C9 | mg/kg | 20 | 73 | 80 | 60 - 140 | 91 |
| | VPH F Bands | TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | 57 | 62.5 | 60 - 140 | 92 |

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

| QC Sample | Sample Number | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272564.001 | LB327003.004 | Mercury | mg/L | 0.0001 | 0.0021 | <0.00005 | 0.008 | 105 |

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

| QC Sample | Sample Number | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272558.004 | LB327039.004 | Mercury | mg/kg | 0.05 | 0.21 | <0.05 | 0.2 | 82 |
| SE272613.001 | LB327037.004 | Mercury | mg/kg | 0.05 | 0.25 | <0.05 | 0.2 | 105 |
| SE272613.020 | LB327038.004 | Mercury | mg/kg | 0.05 | 0.22 | <0.05 | 0.2 | 93 |

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

| QC Sample | Sample Number | Parameter | Units | LOR | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327025.027 | Alpha BHC | mg/kg | 0.1 | <0.1 | - | - |
| | | Hexachlorobenzene (HCB) | mg/kg | 0.1 | <0.1 | - | - |
| | | Beta BHC | mg/kg | 0.1 | <0.1 | - | - |
| | | Lindane (gamma BHC) | mg/kg | 0.1 | <0.1 | - | - |
| | | Delta BHC | mg/kg | 0.1 | <0.1 | 0.2 | 96 |
| | | Heptachlor | mg/kg | 0.1 | <0.1 | 0.2 | 95 |
| | | Aldrin | mg/kg | 0.1 | <0.1 | 0.2 | 98 |
| | | Isodrin | mg/kg | 0.1 | <0.1 | - | - |
| | | Heptachlor epoxide | mg/kg | 0.1 | <0.1 | - | - |
| | | Gamma Chlordane | mg/kg | 0.1 | <0.1 | - | - |
| | | Alpha Chlordane | mg/kg | 0.1 | <0.1 | - | - |
| | | Alpha Endosulfan | mg/kg | 0.2 | <0.2 | - | - |
| | | o,p'-DDE* | mg/kg | 0.1 | <0.1 | - | - |
| | | p,p'-DDE | mg/kg | 0.1 | <0.1 | - | - |
| | | Dieldrin | mg/kg | 0.2 | <0.2 | 0.2 | 93 |
| | | Endrin | mg/kg | 0.2 | <0.2 | 0.2 | 103 |
| | | Beta Endosulfan | mg/kg | 0.2 | <0.2 | - | - |
| | | o,p'-DDD* | mg/kg | 0.1 | <0.1 | - | - |
| | | p,p'-DDD | mg/kg | 0.1 | <0.1 | - | - |
| | | Endrin aldehyde | mg/kg | 0.1 | <0.1 | - | - |
| | | Endosulfan sulphate | mg/kg | 0.1 | <0.1 | - | - |
| | | o,p'-DDT* | mg/kg | 0.1 | <0.1 | - | - |
| | | p,p'-DDT | mg/kg | 0.1 | <0.1 | 0.2 | 98 |
| | | Endrin ketone | mg/kg | 0.1 | <0.1 | - | - |
| | | Methoxychlor | mg/kg | 0.1 | <0.1 | - | - |
| | | Mirex | mg/kg | 0.1 | <0.1 | - | - |
| | | trans-Nonachlor | mg/kg | 0.1 | <0.1 | - | - |
| | | Total CLP OC Pesticides | mg/kg | 1 | <1 | - | - |
| | | Total OC VIC EPA | mg/kg | 1 | <1 | - | - |
| | Surrogates | Tetrachloro-m-xylene (TCMX) (Surrogate) | mg/kg | - | 0.16 | - | 104 |

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

| QC Sample | Sample Number | Parameter | Units | LOR | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327025.027 | Naphthalene | mg/kg | 0.1 | <0.1 | 4 | 99 |
| | | 2-methylnaphthalene | mg/kg | 0.1 | <0.1 | - | - |
| | | 1-methylnaphthalene | mg/kg | 0.1 | <0.1 | - | - |
| | | Acenaphthylene | mg/kg | 0.1 | <0.1 | 4 | 102 |
| | | Acenaphthene | mg/kg | 0.1 | <0.1 | 4 | 100 |
| | | Fluorene | mg/kg | 0.1 | <0.1 | - | - |
| | | Phenanthrene | mg/kg | 0.1 | <0.1 | 4 | 106 |
| | | Anthracene | mg/kg | 0.1 | <0.1 | 4 | 102 |
| | | Fluoranthene | mg/kg | 0.1 | <0.1 | 4 | 102 |
| | | Pyrene | mg/kg | 0.1 | <0.1 | 4 | 106 |
| | | Benzo(a)anthracene | mg/kg | 0.1 | <0.1 | - | - |
| | | Chrysene | mg/kg | 0.1 | <0.1 | - | - |
| | | Benzo(b&j)fluoranthene | mg/kg | 0.1 | <0.1 | - | - |
| | | Benzo(k)fluoranthene | mg/kg | 0.1 | <0.1 | - | - |
| | | Benzo(a)pyrene | mg/kg | 0.1 | <0.1 | 4 | 117 |
| | | Indeno(1,2,3-cd)pyrene | mg/kg | 0.1 | <0.1 | - | - |
| | | Dibenzo(ah)anthracene | mg/kg | 0.1 | <0.1 | - | - |

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

| QC Sample | Sample Number | | Parameter | Units | LOR | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327025.027 | | Benzo(ghi)perylene | mg/kg | 0.1 | <0.1 | - | - |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=0* | TEQ (mg/kg) | 0.2 | <0.2 | - | - |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR/2* | TEQ (mg/kg) | 0.2 | <0.2 | - | - |
| | | | Carcinogenic PAHs, BaP TEQ <LOR=LOR* | TEQ (mg/kg) | 0.3 | <0.3 | - | - |
| | | | Total PAH (18) | mg/kg | 0.8 | <0.8 | - | - |
| | | Surrogates | d5-nitrobenzene (Surrogate) | mg/kg | - | 0.4 | - | 77 |
| | | | 2-fluorobiphenyl (Surrogate) | mg/kg | - | 0.5 | - | 82 |
| | | | d14-p-terphenyl (Surrogate) | mg/kg | - | 0.5 | - | 85 |

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

| QC Sample | Sample Number | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272558.004 | LB327034.004 | Arsenic, As | mg/kg | 1 | 55 | 7 | 50 | 96 |
| | | Cadmium, Cd | mg/kg | 0.3 | 43 | <0.3 | 50 | 85 |
| | | Chromium, Cr | mg/kg | 0.5 | 52 | 5.1 | 50 | 95 |
| | | Copper, Cu | mg/kg | 0.5 | 63 | 9.2 | 50 | 107 |
| | | Nickel, Ni | mg/kg | 0.5 | 56 | 9.2 | 50 | 94 |
| | | Lead, Pb | mg/kg | 1 | 53 | 5 | 50 | 98 |
| | | Zinc, Zn | mg/kg | 2 | 92 | 36 | 50 | 112 |
| SE272613.001 | LB327032.004 | Arsenic, As | mg/kg | 1 | 49 | 2 | 50 | 95 |
| | | Cadmium, Cd | mg/kg | 0.3 | 43 | <0.3 | 50 | 86 |
| | | Chromium, Cr | mg/kg | 0.5 | 51 | 5.0 | 50 | 93 |
| | | Copper, Cu | mg/kg | 0.5 | 51 | 4.0 | 50 | 94 |
| | | Nickel, Ni | mg/kg | 0.5 | 48 | 1.2 | 50 | 94 |
| | | Lead, Pb | mg/kg | 1 | 65 | 21 | 50 | 89 |
| | | Zinc, Zn | mg/kg | 2 | 200 | 120 | 50 | 148 ⑨ |
| SE272613.020 | LB327033.004 | Arsenic, As | mg/kg | 1 | 52 | 1 | 50 | 101 |
| | | Cadmium, Cd | mg/kg | 0.3 | 45 | <0.3 | 50 | 90 |
| | | Chromium, Cr | mg/kg | 0.5 | 53 | 3.6 | 50 | 99 |
| | | Copper, Cu | mg/kg | 0.5 | 54 | 1.9 | 50 | 104 |
| | | Nickel, Ni | mg/kg | 0.5 | 51 | 1.0 | 50 | 101 |
| | | Lead, Pb | mg/kg | 1 | 53 | 4 | 50 | 97 |
| | | Zinc, Zn | mg/kg | 2 | 60 | 11 | 50 | 99 |

## Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

| QC Sample | Sample Number | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272552.001 | LB327348.004 | Lead | µg/L | 1 | 27 | 6 | 20 | 102 |

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

| QC Sample | Sample Number | | Parameter | Units | LOR | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327025.027 | | TRH C10-C14 | mg/kg | 20 | <20 | 40 | 138 |
| | | | TRH C15-C28 | mg/kg | 45 | 91 | 40 | 79 |
| | | | TRH C29-C36 | mg/kg | 45 | 100 | 40 | 25 ⑨ |
| | | | TRH C37-C40 | mg/kg | 100 | <100 | - | - |
| | | | TRH C10-C36 Total | mg/kg | 110 | 190 | - | - |
| | | | TRH >C10-C40 Total (F bands) | mg/kg | 210 | <210 | - | - |
| | | TRH F | TRH >C10-C16 | mg/kg | 25 | <25 | 40 | 138 |
| | | Bands | TRH >C10-C16 - Naphthalene (F2) | mg/kg | 25 | <25 | - | - |
| | | | TRH >C16-C34 (F3) | mg/kg | 90 | 160 | 40 | 18 ⑨ |
| | | | TRH >C34-C40 (F4) | mg/kg | 120 | <120 | - | - |

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

| QC Sample | Sample Number | | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327027.004 | Monocyclic | Benzene | mg/kg | 0.1 | 5.2 | <0.1 | 5 | 103 |
| | | Aromatic | Toluene | mg/kg | 0.1 | 5.2 | <0.1 | 5 | 104 |
| | | | Ethylbenzene | mg/kg | 0.1 | 4.8 | <0.1 | 5 | 95 |
| | | | m/p-xylene | mg/kg | 0.2 | 9.1 | <0.2 | 10 | 90 |
| | | | o-xylene | mg/kg | 0.1 | 4.8 | 0.3 | 5 | 89 |
| | | Polycyclic | Naphthalene (VOC)* | mg/kg | 0.1 | <0.1 | <0.1 | - | - |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 8.2 | 8.0 | - | 82 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 10.1 | 9.5 | - | 101 |

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

| QC Sample | Sample Number | | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327027.004 | Surrogates | Bromofluorobenzene (Surrogate) | mg/kg | - | 10.4 | 9.3 | - | 104 |
| | | Totals | Total BTEX* | mg/kg | 0.6 | 29 | <0.6 | - | - |
| | | | Total Xylenes* | mg/kg | 0.3 | 14 | 0.4 | - | - |

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

| QC Sample | Sample Number | | Parameter | Units | LOR | Result | Original | Spike | Recovery% |
|---|---|---|---|---|---|---|---|---|---|
| SE272613.009 | LB327027.004 | | TRH C6-C10 | mg/kg | 25 | 100 | <25 | 92.5 | 109 |
| | | | TRH C6-C9 | mg/kg | 20 | 88 | <20 | 80 | 108 |
| | | Surrogates | d4-1,2-dichloroethane (Surrogate) | mg/kg | - | 8.2 | 8.0 | - | 82 |
| | | | d8-toluene (Surrogate) | mg/kg | - | 10.1 | 9.5 | - | 101 |
| | | | Bromofluorobenzene (Surrogate) | mg/kg | - | 10.4 | 9.3 | - | 104 |
| | | VPH F | Benzene (F0) | mg/kg | 0.1 | 6.4 | <0.1 | - | - |
| | | Bands | TRH C6-C10 minus BTEX (F1) | mg/kg | 25 | 67 | <25 | 62.5 | 104 |

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

| | |
|---|---|
| * | NATA accreditation does not cover the performance of this service. |
| ** | Indicative data, theoretical holding time exceeded. |
| *** | Indicates that both * and ** apply. |
| - | Sample not analysed for this analyte. |
| IS | Insufficient sample for analysis. |
| LNR | Sample listed, but not received. |
| LOR | Limit of reporting. |
| QFH | QC result is above the upper tolerance. |
| QFL | QC result is below the lower tolerance. |
| ① | At least 2 of 3 surrogates are within acceptance criteria. |
| ② | RPD failed acceptance criteria due to sample heterogeneity. |
| ③ | Results less than 5 times LOR preclude acceptance criteria for RPD. |
| ④ | Recovery failed acceptance criteria due to matrix interference. |
| ⑤ | Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level). |
| ⑥ | LOR was raised due to sample matrix interference. |
| ⑦ | LOR was raised due to dilution of significantly high concentration of analyte in sample. |
| ⑧ | Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results. |
| ⑨ | Recovery failed acceptance criteria due to sample heterogeneity. |
| ⑩ | LOR was raised due to high conductivity of the sample (required dilution). |
| † | Refer to relevant report comments for further information. |

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# SAMPLE RECEIPT ADVICE

SE272613

## CLIENT DETAILS

| | |
|---|---|
| Contact | Mark Kelly |
| Client | GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TR |
| Address | PO BOX 398<br>DRUMMOYNE NSW 2164 |
| Telephone | 1300137038 |
| Facsimile | (Not specified) |
| Email | mark.kelly@aargus.net |
| Project | **ES9402/3 Oxford Falls DSI** |
| Order Number | **COD ES9402/3** |
| Samples | 48 |

## LABORATORY DETAILS

| | |
|---|---|
| Manager | Shane McDermott |
| Laboratory | SGS Alexandria Environmental |
| Address | Unit 16, 33 Maddox St<br>Alexandria NSW 2015 |
| Telephone | +61 2 8594 0400 |
| Facsimile | +61 2 8594 0499 |
| Email | au.environmental.sydney@sgs.com |
| Samples Received | Wed 16/10/2024 |
| Report Due | Wed 23/10/2024 |
| SGS Reference | **SE272613** |

## SUBMISSION DETAILS

This is to confirm that 48 samples were received on Wednesday 16/10/2024. Results are expected to be ready by COB Wednesday 23/10/2024. Please quote SGS reference SE272613 when making enquiries. Refer below for details relating to sample integrity upon receipt.

| | | | |
|---|---|---|---|
| Sample counts by matrix | 46 Soil, 2 Water | Type of documentation received | COC |
| Date documentation received | 16/10/2024 | Samples received in good order | Yes |
| Samples received without headspace | Yes | Sample temperature upon receipt | 12.1°C |
| Sample container provider | SGS | Turnaround time requested | Standard |
| Samples received in correct containers | Yes | Sufficient sample for analysis | Yes |
| Sample cooling method | Ice Bricks | Samples clearly labelled | Yes |
| Complete documentation received | Yes | | |

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

## COMMENTS

24 Soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

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# SAMPLE RECEIPT ADVICE

SE272613

CLIENT DETAILS

Client GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TRUST Project ES9402/3 Oxford Falls DSI

SUMMARY OF ANALYSIS

| No. | Sample ID | Exchangeable Cations and Cation Exchange Capacity | OC Pesticides in Soil | PAH (Polynuclear Aromatic Hydrocarbons) in Soil | PCBs in Soil | pH in soil (1:5) | TRH (Total Recoverable Hydrocarbons) in Soil | VOC's in Soil | Volatile Petroleum Hydrocarbons in Soil |
|---|---|---|---|---|---|---|---|---|---|
| 001 | BH1 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 002 | BH2 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 003 | BH3 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 004 | BH4 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 005 | BH4 0.3-0.4 | 13 | - | - | - | 1 | - | - | - |
| 006 | BH5 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 007 | BH6 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 008 | BH7 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 009 | BH8 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 011 | BH9 0.0-0.1 | - | 30 | - | - | - | - | - | - |
| 012 | BH10 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 014 | BH11 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 015 | BH12 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 016 | BH13 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 018 | BH14 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 020 | BH15 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 021 | BH16 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 022 | BH17 0.0-0.1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 024 | BH18 0.0-0.1 | - | 30 | 26 | 11 | - | 10 | 11 | 7 |

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

# SAMPLE RECEIPT ADVICE

SE272613

CLIENT DETAILS

Client GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TRUST Project ES9402/3 Oxford Falls DSI

SUMMARY OF ANALYSIS

| No. | Sample ID | Exchangeable Cations and Cation Exchange Capacity | OC Pesticides in Soil | PAH (Polynuclear Aromatic Hydrocarbons) in Soil | PCBs in Soil | pH in soil (1:5) | TRH (Total Recoverable Hydrocarbons) in Soil | VOC's in Soil | Volatile Petroleum Hydrocarbons in Soil |
|---|---|---|---|---|---|---|---|---|---|
| 038 | BH30 0.5-0.6 | 13 | - | - | - | 1 | - | - | - |
| 041 | DUPLICATE D1 | - | 30 | 26 | - | - | 10 | 11 | 7 |
| 042 | DUPLICATE D2 | - | 30 | 26 | 11 | - | 10 | 11 | 7 |
| 045 | TRIP BLANK TB1 | - | - | - | - | - | - | 11 | 7 |
| 046 | TRIP SPIKE TS1 | - | - | - | - | - | - | 11 | - |
| 047 | TRIP BLANK TB2 | - | - | - | - | - | - | 11 | 7 |
| 048 | TRIP SPIKE TS2 | - | - | - | - | - | - | 11 | - |

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Testing as per this table shall commence immediately unless the client intervenes with a correction .

# SAMPLE RECEIPT ADVICE

SE272613

CLIENT DETAILS

Client GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TRUST Project ES9402/3 Oxford Falls DSI

SUMMARY OF ANALYSIS

| No. | Sample ID | Mercury in Soil | Moisture Content | Total Recoverable Elements in Soil/Waste |
|---|---|---|---|---|
| 001 | BH1 0.0-0.1 | 1 | 1 | 7 |
| 002 | BH2 0.0-0.1 | 1 | 1 | 7 |
| 003 | BH3 0.0-0.1 | 1 | 1 | 7 |
| 004 | BH4 0.0-0.1 | 1 | 1 | 7 |
| 005 | BH4 0.3-0.4 | 1 | 1 | 7 |
| 006 | BH5 0.0-0.1 | 1 | 1 | 7 |
| 007 | BH6 0.0-0.1 | 1 | 1 | 7 |
| 008 | BH7 0.0-0.1 | 1 | 1 | 7 |
| 009 | BH8 0.0-0.1 | 1 | 1 | 7 |
| 010 | BH8 0.4-0.5 | 1 | 1 | 7 |
| 011 | BH9 0.0-0.1 | 1 | 1 | 7 |
| 012 | BH10 0.0-0.1 | 1 | 1 | 7 |
| 013 | BH10 0.6-0.7 | 1 | 1 | 7 |
| 014 | BH11 0.0-0.1 | 1 | 1 | 7 |
| 015 | BH12 0.0-0.1 | 1 | 1 | 7 |
| 016 | BH13 0.0-0.1 | 1 | 1 | 7 |
| 017 | BH13 0.7-0.8 | 1 | 1 | 7 |
| 018 | BH14 0.0-0.1 | 1 | 1 | 7 |
| 019 | BH14 0.4-0.5 | 1 | 1 | 7 |
| 020 | BH15 0.0-0.1 | 1 | 1 | 7 |
| 021 | BH16 0.0-0.1 | 1 | 1 | 7 |
| 022 | BH17 0.0-0.1 | 1 | 1 | 7 |
| 023 | BH17 0.5-0.6 | 1 | 1 | 7 |
| 024 | BH18 0.0-0.1 | 1 | 1 | 7 |

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Please indicate as soon as possible should your request differ from these details .
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# SAMPLE RECEIPT ADVICE

SE272613

CLIENT DETAILS

Client GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TRUST Project ES9402/3 Oxford Falls DSI

SUMMARY OF ANALYSIS

| No. | Sample ID | Mercury in Soil | Moisture Content | Total Recoverable Elements in Soil/Waste |
|---|---|---|---|---|
| 025 | BH18 0.6-0.7 | 1 | 1 | 7 |
| 026 | BH19 0.0-0.1 | 1 | 1 | 7 |
| 027 | BH20 0.0-0.1 | 1 | 1 | 7 |
| 028 | BH21 0.0-0.1 | 1 | 1 | 7 |
| 029 | BH22 0.0-0.1 | 1 | 1 | 7 |
| 030 | BH23 0.0-0.1 | 1 | 1 | 7 |
| 031 | BH24 0.0-0.1 | 1 | 1 | 7 |
| 032 | BH25 0.0-0.1 | 1 | 1 | 7 |
| 033 | BH26 0.0-0.1 | 1 | 1 | 7 |
| 034 | BH27 0.0-0.1 | 1 | 1 | 7 |
| 035 | BH28 0.0-0.1 | 1 | 1 | 7 |
| 036 | BH29 0.0-0.1 | 1 | 1 | 7 |
| 037 | BH30 0.0-0.1 | 1 | 1 | 7 |
| 038 | BH30 0.5-0.6 | 1 | 1 | 7 |
| 039 | BH31 0.0-0.1 | 1 | 1 | 7 |
| 040 | BH32 0.0-0.1 | 1 | 1 | 7 |
| 041 | DUPLICATE D1 | 1 | 1 | 7 |
| 042 | DUPLICATE D2 | 1 | 1 | 7 |
| 045 | TRIP BLANK TB1 | - | 1 | - |
| 047 | TRIP BLANK TB2 | - | 1 | - |

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

# SAMPLE RECEIPT ADVICE

SE272613

CLIENT DETAILS

Client GSNE SERVICES PTY LTD ATF AARGUS ENGINEERING TRUST Project ES9402/3 Oxford Falls DSI

SUMMARY OF ANALYSIS

| No. | Sample ID | Mercury (dissolved) in Water | Trace Metals (Dissolved) in Water by ICPMS |
|---|---|---|---|
| 043 | RINSATE R1 | 1 | 7 |
| 044 | RINSATE R2 | 1 | 7 |

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Testing as per this table shall commence immediately unless the client intervenes with a correction .

SGS EHS Sydney COC

**SE272613**

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody

46 Smithfield Road
Smithfield NSW 2164

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038

Email reports: cynthia@aargus.net; mark.kelly@aargus.net; harsha@aargus.net; sagar@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



**TO:** SGS Environmental
Unit 16, 33 Maddox Street
Alexandria NSW

**PH:** 8594 0400 **FAX:** 8594 0499 **Email:** au.samplereceipt.sydney@sgs.com
**ATTN:** Samples Receipt

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD TAT**
**Pricelist Code: 1352083**

| | Location | Depth (m) | Date | Soil | Water | Metals ( As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH | BTEX | PAH | OCP | pH, CEC | | | | Analysis Suite(s) | KEEP SAMPLE? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH1 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH1 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 2 | BH2 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH2 | 0.4 - 0.5 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 3 | BH3 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH3 | 0.4 - 0.5 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 4 | BH4 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| 5 | BH4 | 0.3 - 0.4 | 09.10.2024 | DSG | | ✓ | | | | | ✓ | | | | CL2 | YES |
| 6 | BH5 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH5 | 0.4 - 0.5 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 7 | BH6 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH6 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 8 | BH7 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| | BH7 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 9 | BH8 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 10 | BH8 | 0.4 - 0.5 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | | | | | | | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | | | 16.10.24 3.45 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) | @ mole $H^+$/tonne |
| WP | Water sample, plastic bottle | Disturbed soil sample (glass jar) | ✓ | Test required | |
| GV | Glass vial | Other | ACAN | Air sample, canister | |

12.1

source: SE_Autoscan.pdf page: 1 SGS Ref: SE272613_COC

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038

Email reports: cynthia@aargus.net; mark.kelly@aargus.net; harsha@aargus.net; sagar@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



**TO:** SGS Environmental
Unit 16, 33 Maddox Street
Alexandria NSW

**PH:** 8594 0400 **FAX:** 8594 0499 **Email:** au.samplereceipt.sydney@sgs.com
**ATTN:** Samples Receipt

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD TAT**
**Pricelist Code: 1352083**

| Sampling details | | | Sample type | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Depth (m) | Date | Soil | Water | Metals ( As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH | BTEX | PAH | OCP | | | | | Analysis Suite(s) | KEEP SAMPLE? |
| 11 BH9 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | ✓ | | | | | CL2 | YES |
| BH9 | 0.4 - 0.5 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 12 BH10 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 13 BH10 | 0.6 - 0.7 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 14 BH11 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| BH11 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 15 BH12 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| BH12 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 16 BH13 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 17 BH13 | 0.7 - 0.8 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 18 BH14 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 19 BH14 | 0.4 - 0.5 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 20 BH15 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| BH15 | 0.6 - 0.7 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 21 BH16 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| BH16 | 0.5 - 0.6 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | [illegible] | [illegible] | 16.10.24 3:47 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) | @ mole $H^+$/tonne |
| WP | Water sample, plastic bottle | Disturbed soil sample (glass jar) | ✓ | Test required | |
| GV | Glass vial | Other | ACAN | Air sample, canister | |

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398
DRUMMOYNE NSW 1470

Tel: 1300 137 038
Fax: 1300 136 038

Email reports: cynthia@aargus.net; mark.kelly@aargus.net; harsha@aargus.net; sagar@aargus.net
Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



**TO:** **SGS Environmental**
**Unit 16, 33 Maddox Street**
**Alexandria NSW**

**PH:** **8594 0400** **FAX:** **8594 0499** **Email:** au.samplereceipt.sydney@sgs.com
**ATTN:** **Samples Receipt**

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD TAT**
**Pricelist Code: 1352083**

| | Sampling details | | | Sample type | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location | Depth (m) | Date | Soil | Water | Metals ( As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH | BTEX | PAH | OCP | PCB | | | | Analysis Suite(s) | KEEP SAMPLE? |
| 22 | BH17 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 23 | BH17 | 0.5 - 0.6 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 24 | BH18 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | CL16 | YES |
| 25 | BH18 | 0.6 - 0.7 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 26 | BH19 | 0.0 - 0.1 | 09.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH19 | 0.7 - 0.8 | 09.10.2024 | DSG | | | | | | | | | | | | YES |
| 27 | BH20 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH20 | 0.6 - 0.7 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 28 | BH21 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH21 | 0.4 - 0.5 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 29 | BH22 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH22 | 0.5 - 0.6 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 30 | BH23 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH23 | 0.5 - 0.6 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 31 | BH24 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH24 | 0.6 - 0.7 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | | | 16.10.24 3:45 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | | Disturbed soil sample (glass jar) | ✓ | Test required |
| GV | Glass vial | | Other | ACAN | Air sample, canister |

@ mole $H^+$/tonne

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398 Tel: 1300 137 038 Email reports: cynthia@aargus.net; mark.kelly@aargus.net; harsha@aargus.net; sagar@aargus.net
DRUMMOYNE NSW 1470 Fax: 1300 136 038 Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



**TO:** **SGS Environmental**
**Unit 16, 33 Maddox Street**
**Alexandria NSW**

**PH:** **8594 0400** **FAX:** **8594 0499** **Email:** au.samplereceipt.sydney@sgs.com
**ATTN:** **Samples Receipt**

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD TAT**
**Pricelist Code: 1352083**

| | Location | Depth (m) | Date | Soil | Water | Metals ( As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH | BTEX | PAH | OCP | pH, CEC | | | | Analysis Suite(s) | KEEP SAMPLE? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | BH25 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH25 | 0.6 - 0.7 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 33 | BH26 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH26 | 0.5 - 0.6 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 34 | BH27 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH27 | 0.4 - 0.5 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 35 | BH28 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH28 | 0.4 - 0.5 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 36 | BH29 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH29 | 0.4 - 0.5 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 37 | BH30 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| 38 | BH30 | 0.5 - 0.6 | 10.10.2024 | DSG | | ✓ | | | | | ✓ | | | | CL2 | YES |
| 39 | BH31 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH31 | 0.5 - 0.6 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 40 | BH32 | 0.0 - 0.1 | 10.10.2024 | DSG | | ✓ | | | | | | | | | CL2 | YES |
| | BH32 | 0.5 - 0.6 | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | | | 16/10/24 3:21 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | | Disturbed soil sample (glass jar) | ✓ | Test required |
| GV | Glass vial | | Other | ACAN | Air sample, canister |

@ mole $H^+$/tonne

# AARGUS ENGINEERING TRUST PTY LTD

## Laboratory Test Request / Chain of Custody Record

46 Smithfield Road
Smithfield NSW 2164

P O Box 398 Tel: 1300 137 038 Email reports: cynthia@aargus.net; mark.kelly@aargus.net; harsha@aargus.net; sagar@aargus.net
DRUMMOYNE NSW 1470 Fax: 1300 136 038 Email invoices: aarguseng@gmail.com; cynthia@aargus.net; mark.kelly@aargus.net



**TO:** **SGS Environmental**
**Unit 16, 33 Maddox Street**
**Alexandria NSW**

**PH:** **8594 0400** **FAX:** **8594 0499** **Email:** au.samplereceipt.sydney@sgs.com
**ATTN:** **Samples Receipt**

| | | | |
|---|---|---|---|
| **Sampling Date:** | 09 & 10.10.2024 | **Job No:** | ES9402/3 |
| **Sampled By:** | HM | **Project:** | DSI |
| **Project Manager:** | MK | **Location:** | Oxford Falls |

**Results required by: STANDARD TAT**
**Pricelist Code: 1352083**

| Sampling details | | | Sample type | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Depth (m) | Date | Soil | Water | Metals ( As, Cd, Cr, Cu, Hg, Pb, Ni, Zn) | TPH | BTEX | PAH | OCP | PCB | | | | Analysis Suite(s) | KEEP SAMPLE? |
| 41 DUPLICATE D1 | - | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | CL10 | YES |
| 42 DUPLICATE D2 | - | 09.10.2024 | DSG | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | CL16 | YES |
| DUPLICATE D3 | - | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| DUPLICATE D4 | - | 10.10.2024 | DSG | | | | | | | | | | | | YES |
| 43 RINSATE R1 | - | 09.10.2024 | | WG,WP | ✓ | | | | | | | | | | YES |
| 44 RINSATE R2 | - | 10.10.2024 | | WG,WP | ✓ | | | | | | | | | CL2 | YES |
| 45 TRIP BLANK TB1 | | 09.10.2024 | VIALS | | | | | | | | | | | CL2 | YES |
| 46 TRIP SPIKE TS1 | | 09.10.2024 | VIALS | | Please test for TRH F1 and BTEXN | | | | | | | | | | |
| 47 TRIP BLANK TB2 | | 10.10.2024 | VIALS | | | | | | | | | | | | |
| 48 TRIP SPIKE TS2 | | 10.10.2024 | VIALS | | Please test for TRH F1 and BTEXN | | | | | | | | | | |

| Relinquished by | | | Received by | | |
|---|---|---|---|---|---|
| Name | Signature | Date | Name | Signature | Date |
| HARSHA | HM | 14.10.2024 | [illegible] | [illegible] | 16.10.24 3:45 |

Legend:

| | | | | | |
|---|---|---|---|---|---|
| WG | Water sample, glass bottle | | Undisturbed soil sample (glass jar) | DSP | Disturbed soil sample (small plastic bag) |
| WP | Water sample, plastic bottle | | Disturbed soil sample (glass jar) | ✓ | Test required |
| GV | Glass vial | | Other | ACAN | Air sample, canister |

@ mole $H^+$/tonne

## Yin, Emily (Alexandria)

**From:** Harsha <harsha@aargus.net>
**Sent:** Thursday, 17 October 2024 8:17 AM
**To:** Yin, Emily (Alexandria); Mark Kelly
**Cc:** Luong, Thi Song Van (Alexandria)
**Subject:** [EXTERNAL] Re: SE272613 - ES9402/3

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments.
***

---

We are not testing anything for D3 and D4. Please ignore that from COC.

Kind Regards

**Harsha Muthu**
**Environmental Engineer**

**Aargus**

**Aargus Engineering Trust Pty Ltd**
46 Smithfield Road, Smithfield NSW 2164
PO Box 398, Drummoyne NSW 1470
Email: Harsha@aargus.net
Tel: 1300 137 038 Fax: 1300 136 038
www.aargus.net

**WHS & HAZMAT – ENVIRONMENTAL – ENGINEERING – DRILLING – LABORATORIES**

*Aargus is the Greek Mythological Beast with a hundred eyes known to be the protector of the villages...*

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**From:** Yin, Emily (Alexandria) <Emily.Yin@sgs.com>
**Sent:** Wednesday, October 16, 2024 8:43 PM
**To:** Mark Kelly <mark.kelly@aargus.net>; Harsha <harsha@aargus.net>

# APPENDIX O

## SUMMARY OF RESULTS



**TABLE 1**
**SCHEDULE OF LABORATORY TESTING**

| Sample | Depth (m) | TYPE | SAMPLING DATE | DUPLICATE | SPLIT | MET-8 | TPH | BTEX | PAH | OC | PCB | ASBESTOS | pH, CEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH1 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH1 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |
| BH2 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH2 | 0.4 - 0.5 | N | 09.10.2024 | | | | | | | | | | |
| BH3 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH3 | 0.4 - 0.5 | N | 09.10.2024 | | | | | | | | | | |
| BH4 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH4 | 0.3 - 0.4 | N | 09.10.2024 | | | ✓ | | | | | | | ✓ |
| BH5 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH5 | 0.4 - 0.5 | N | 09.10.2024 | | | | | | | | | | |
| BH6 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH6 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |
| BH7 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH7 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |
| BH8 | 0.0 - 0.1 | T | 09.10.2024 | D1 | SS1 | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH8 | 0.4 - 0.5 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH9 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | ✓ | | ✓ | |
| BH9 | 0.4 - 0.5 | N | 09.10.2024 | | | | | | | | | | |
| BH10 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH10 | 0.6 - 0.7 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH11 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH11 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |
| BH12 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH12 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |
| BH13 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH13 | 0.7 - 0.8 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH14 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH14 | 0.4 - 0.5 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH15 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH15 | 0.6 - 0.7 | N | 09.10.2024 | | | | | | | | | | |
| BH16 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH16 | 0.5 - 0.6 | N | 09.10.2024 | | | | | | | | | | |

Notes

MET-8: arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc
OC : Organochlorine Pesticides
PCB : Polychlorinated Biphenyls
PAH: Polycyclic Aromatic Hydrocarbons
TPH: Total Petroleum Hydrcarbons
BTEX: Benzene, Toluene, Ethyl Benzene, Xylene
F,T,N: Fill, Topsoil, Natural

**TABLE 2**
**SCHEDULE OF LABORATORY TESTING**

| Analyte / Analyte Group | | TYPE | SAMPLING DATE | DUPLICATE | SPLIT | MET-8 | TPH | BTEX | PAH | OC | PCB | ASBESTOS | pH, CEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample | Depth (m) | | | | | | | | | | | | |
| BH17 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| BH17 | 0.5 - 0.6 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH18 | 0.0 - 0.1 | F | 09.10.2024 | D2 | SS2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| BH18 | 0.6 - 0.7 | N | 09.10.2024 | | | ✓ | | | | | | | |
| BH19 | 0.0 - 0.1 | T | 09.10.2024 | | | ✓ | | | | | | ✓ | |
| BH19 | 0.7 - 0.8 | N | 09.10.2024 | | | | | | | | | | |
| BH20 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH20 | 0.6 - 0.7 | N | 10.10.2024 | | | | | | | | | | |
| BH21 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH21 | 0.4 - 0.5 | N | 10.10.2024 | | | | | | | | | | |
| BH22 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH22 | 0.5 - 0.6 | N | 10.10.2024 | | | | | | | | | | |
| BH23 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH23 | 0.5 - 0.6 | N | 10.10.2024 | | | | | | | | | | |
| BH24 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH24 | 0.6 - 0.7 | N | 10.10.2024 | | | | | | | | | | |
| BH25 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH25 | 0.6 - 0.7 | N | 10.10.2024 | | | | | | | | | | |
| BH26 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH26 | 0.5 - 0.6 | N | 10.10.2024 | | | | | | | | | | |
| BH27 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH27 | 0.4 - 0.5 | N | 10.10.2024 | | | | | | | | | | |
| BH28 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH28 | 0.4 - 0.5 | N | 10.10.2024 | | | | | | | | | | |
| BH29 | 0.0 - 0.1 | T | 10.10.2024 | D4 | | ✓ | | | | | | ✓ | |
| BH29 | 0.4 - 0.5 | N | 10.10.2024 | | | | | | | | | | |
| BH30 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH30 | 0.5 - 0.6 | N | 10.10.2024 | | | ✓ | | | | | | | ✓ |
| BH31 | 0.0 - 0.1 | T | 10.10.2024 | D3 | | ✓ | | | | | | ✓ | |
| BH31 | 0.5 - 0.6 | N | 10.10.2024 | | | | | | | | | | |
| BH32 | 0.0 - 0.1 | T | 10.10.2024 | | | ✓ | | | | | | ✓ | |
| BH32 | 0.5 - 0.6 | N | 10.10.2024 | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Notes

MET-8: arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc
OC : Organochlorine Pesticides
PCB : Polychlorinated Biphenyls
PAH: Polycyclic Aromatic Hydrocarbons
TPH: Total Petroleum Hydrcarbons
BTEX: Benzene, Toluene, Ethyl Benzene, Xylene
F,T,N: Fill, Topsoil, Natural

**TABLE A1-1**

**HEAVY METALS TEST RESULTS FOR HILs & EILs**

| Analyte / Sample Location | Depth (m) | HEAVY METALS (mg/kg) ARSENIC | CADMIUM | CHROMIUM | COPPER | LEAD [g] | MERCURY | NICKEL | ZINC |
|---|---|---|---|---|---|---|---|---|---|
| BH1 | 0.0 - 0.1 | 2 | <0.3 | 5.0 | 4.0 | 21 | <0.05 | 1.2 | 120 |
| BH2 | 0.0 - 0.1 | <1 | <0.3 | 3.1 | 1.5 | 8 | <0.05 | <0.5 | 35 |
| BH3 | 0.0 - 0.1 | <1 | <0.3 | 3.2 | 1.2 | 7 | <0.05 | <0.5 | 32 |
| BH4 | 0.0 - 0.1 | 1 | <0.3 | 4.4 | 3.2 | 16 | <0.05 | 1.4 | 27 |
| BH4 | 0.3 - 0.4 | 2 | <0.3 | 13 | <0.5 | 4 | <0.05 | <0.5 | 4.2 |
| BH5 | 0.0 - 0.1 | <1 | <0.3 | 4.9 | 3.3 | 86 | <0.05 | <0.5 | 32 |
| BH6 | 0.0 - 0.1 | <1 | <0.3 | 4.4 | 3.2 | 100 | <0.05 | <0.5 | 37 |
| BH7 | 0.0 - 0.1 | 1 | <0.3 | 4.7 | 3.3 | 100 | <0.05 | 0.7 | 36 |
| BH8 | 0.0 - 0.1 | 2 | <0.3 | 4.7 | 3.9 | 14 | <0.05 | 1.3 | 34 |
| BH8 | 0.4 - 0.5 | 1 | <0.3 | 13 | <0.5 | 3 | <0.05 | <0.5 | 3.0 |
| BH9 | 0.0 - 0.1 | 1 | <0.3 | 4.7 | 2.9 | 13 | <0.05 | 1.0 | 30 |
| BH10 | 0.0 - 0.1 | 4 | 0.8 | 19 | 230 | **880** | <0.05 | 15 | 3400 |
| BH10 | 0.6 - 0.7 | <1 | <0.3 | 8.9 | 6.8 | 31 | <0.05 | 0.7 | 180 |
| BH11 | 0.0 - 0.1 | 4 | 1.1 | 30 | 330 | **1300** | <0.05 | 22 | 5400 |
| BH12 | 0.0 - 0.1 | 5 | 0.9 | 19 | 240 | **800** | <0.05 | 14 | 3400 |
| BH13 | 0.0 - 0.1 | 1 | <0.3 | 4.5 | 13 | 64 | <0.05 | 1.2 | 75 |
| BH13 | 0.7 - 0.8 | 1 | <0.3 | 9.1 | 5.7 | 27 | <0.05 | 0.9 | 42 |
| BH14 | 0.0 - 0.1 | 2 | <0.3 | 5.0 | 12 | 24 | <0.05 | 2.2 | 73 |
| BH14 | 0.4 - 0.5 | <1 | <0.3 | 3.9 | 2.6 | 10 | <0.05 | 1.2 | 17 |
| BH15 | 0.0 - 0.1 | 1 | <0.3 | 3.6 | 1.9 | 4 | <0.05 | 1.0 | 11 |
| BH16 | 0.0 - 0.1 | 1 | <0.3 | 3.1 | 4.7 | 14 | <0.05 | 0.9 | 67 |
| Practical Quantitation Limits (PQL) | | 1 | 0.3 | 0.5 | 0.5 | 1 | 0.05 | 0.5 | 2 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | | | | | |
| ***Health Investigation Levels (HIL) - Table 1A (1)*** | | | | | | | | | |
| HIL A [a] | | 100 | 20 | 100 | 6000 | 300 | 40[e] / 10[f] | 400 | 7400 |
| HIL B [b] | | 500 | 150 | 500 | 30,000 | 1,200 | 120[e] / 30[f] | 1200 | 60,000 |
| HIL C [c] | | 300 | 90 | 300 | 17,000 | 600 | 80[e] / 13[f] | 1200 | 30,000 |
| HIL D [d] | | 3000 | 900 | 3600 | 240,000 | 1,500 | 730[e] / 180[f] | 6000 | 400,000 |
| ***Ecological Investigation Levels (EIL) - Table 1B (5)*** | | | | | | | | | |
| Areas of ecological significance | | 40[h] | | | | | | | |
| Urban residential and public open space [i] | | 100[h] | | | | | | | |
| Commercial and industrial | | 160[h] | | | | | | | |

Notes

a: Residential with garden/accessible soil (home grown poduce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.

b: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high rise buildings and apartments.

c: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate

d: Commercial/industrial, includes premises such as shops, offices, factories and industrial sites

e: Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present,

f: Methyl mercury: assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition the reliability and quality of sampling/analysis should be considered.

g: Lead: HIL is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HIL D where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate.

**TABLE A1-2**

**HEAVY METALS TEST RESULTS FOR HILs & EILs**

| Analyte / Sample Location | Depth (m) | HEAVY METALS (mg/kg) ARSENIC | CADMIUM | CHROMIUM | COPPER | LEAD g | MERCURY | NICKEL | ZINC |
|---|---|---|---|---|---|---|---|---|---|
| BH17 | 0.0 - 0.1 | 1 | <0.3 | 3.0 | 5.1 | 15 | <0.05 | 1.0 | 44 |
| BH17 | 0.5 - 0.6 | <1 | <0.3 | 2.6 | 2.3 | 14 | <0.05 | 0.6 | 42 |
| BH18 | 0.0 - 0.1 | 4 | <0.3 | 15 | 9.9 | 13 | <0.05 | 5.1 | 39 |
| BH18 | 0.6 - 0.7 | 2 | <0.3 | 11 | 4.4 | 20 | <0.05 | 2.5 | 31 |
| BH19 | 0.0 - 0.1 | 3 | <0.3 | 8.2 | 8.9 | 8 | <0.05 | 2.3 | 18 |
| BH20 | 0.0 - 0.1 | 3 | <0.3 | 11 | 4.2 | 8 | <0.05 | 3.9 | 26 |
| BH21 | 0.0 - 0.1 | 2 | <0.3 | 7.9 | 2.8 | 6 | <0.05 | 0.7 | 9.7 |
| BH22 | 0.0 - 0.1 | 2 | <0.3 | 6.9 | 2.2 | 5 | <0.05 | 0.5 | 8.0 |
| BH23 | 0.0 - 0.1 | 2 | <0.3 | 7.4 | 2.4 | 5 | <0.05 | <0.5 | 6.5 |
| BH24 | 0.0 - 0.1 | 2 | <0.3 | 8.4 | 5.7 | 61 | <0.05 | 1.4 | 61 |
| BH25 | 0.0 - 0.1 | 2 | <0.3 | 5.3 | 5.6 | 110 | <0.05 | 1.5 | 95 |
| BH26 | 0.0 - 0.1 | 2 | <0.3 | 5.8 | 7.0 | 130 | <0.05 | 1.3 | 120 |
| BH27 | 0.0 - 0.1 | 1 | <0.3 | 7.8 | 14 | 160 | 0.10 | 1.3 | 39 |
| BH28 | 0.0 - 0.1 | 1 | <0.3 | 7.5 | 16 | 21 | 0.12 | 1.3 | 49 |
| BH29 | 0.0 - 0.1 | 1 | <0.3 | 7.6 | 9.9 | 18 | 0.11 | 1.2 | 35 |
| BH30 | 0.0 - 0.1 | 1 | <0.3 | 7.8 | 11 | 19 | 0.12 | 1.2 | 42 |
| BH30 | 0.5 - 0.6 | 1 | <0.3 | 15 | 5.6 | 6 | <0.05 | 1.2 | 7.3 |
| BH31 | 0.0 - 0.1 | 2 | <0.3 | 8.8 | 15 | 22 | 0.09 | 2.1 | 43 |
| BH32 | 0.0 - 0.1 | 2 | <0.3 | 7.4 | 28 | 37 | 0.44 | 1.6 | 100 |
| DUPLICATE D1 | - | 2 | <0.3 | 12 | 12 | 14 | <0.05 | 3.3 | 39 |
| DUPLICATE D2 | - | 2 | <0.3 | 16 | 5.9 | 6 | <0.05 | 1.3 | 7.8 |
| SPLIT SS1 | - | <5 | <1 | 10 | 8 | 20 | <0.1 | 2 | 35 |
| SPLIT SS2 | - | <5 | <1 | 11 | 12 | 19 | <0.1 | 3 | 41 |
| Practical Quantitation Limits (PQL) | | 1 | 0.3 | 0.5 | 0.5 | 1 | 0.05 | 0.5 | 2 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | | | | | |
| ***Health Investigation Levels (HIL) - Table 1A (1)*** | | | | | | | | | |
| HIL A [a] | | 100 | 20 | 100 | 6000 | 300 | 40[e] / 10[f] | 400 | 7400 |
| HIL B [b] | | 500 | 150 | 500 | 30,000 | 1,200 | 120[e] / 30[f] | 1200 | 60,000 |
| HIL C [c] | | 300 | 90 | 300 | 17,000 | 600 | 80[e] / 13[f] | 1200 | 30,000 |
| HIL D [d] | | 3000 | 900 | 3600 | 240,000 | 1,500 | 730[e] / 180[f] | 6000 | 400,000 |
| ***Ecological Investigation Levels (EIL) - Table 1B (5)*** | | | | | | | | | |
| Areas of ecological significance | | 40[h] | | | | | | | |
| Urban residential and public open space [i] | | 100[h] | | | | | | | |
| Commercial and industrial | | 160[h] | | | | | | | |

Notes

a: Residential with garden/accessible soil (home grown poduce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.

b: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high rise buildings and apartments.

c: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate

d: Commercial/industrial, includes premises such as shops, offices, factories and industrial sites

e: Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present,

**TABLE A2**

**CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS FOR THE SOIL PROPERTIES FOR EILs**

| Analyte / Sample Location | Depth (m) | CEC (cmol/kg) | pH (pH units) |
|---|---|---|---|
| BH4 | 0.3 - 0.4 | 1.6 | 6.1 |
| BH30 | 0.5 - 0.6 | 1.1 | 5.0 |

**TABLE A3**
**SITE DERIVED EILs**

| Analyte / Sample Location | Depth (m) | HEAVY METALS (mg/kg) COPPER | LEAD | NICKEL | ZINC |
|---|---|---|---|---|---|
| **Added Contaminant Limit (ACL)** [a] | | | | | |
| BH4 | 0.3 - 0.4 | 95 | 1100 | 30 | 230 |
| BH30 | 0.5 - 0.6 | 95 | 1100 | 30 | 130 |
| **Ambient Background Concentration (ABC)** | | | | | |
| BH4 | 0.3 - 0.4 | <0.5 | 4 | <0.5 | 4.2 |
| BH30 | 0.5 - 0.6 | 5.6 | 6 | 1.2 | 7.3 |
| **Calculated EIL (ABC + ACL)** | | | | | |
| BH4 | 0.3 - 0.4 | 95 | 1104 | 30 | 234.2 |
| BH30 | 0.5 - 0.6 | 100.6 | 1106 | 31.2 | 137.3 |
| **FINAL SITE EIL AFTER ROUNDING** [b] | | | | | |
| **Western Portion** | | | | | |
| BH4 | 0.3 - 0.4 | 95 | 1100 | 30 | 230 |
| **Eastern Portion** | | | | | |
| BH30 | 0.5 - 0.6 | 100 | 1100 | 30 | 140 |

Notes a: The ACL for Cu may be determined by pH or CEC and the lower of the determined values should be selected for EIL calculation.

b: The following rounding rules are applicable to the EILs:

| | |
|---|---|
| <1 | to nearest 0.1 |
| 1 - <10 | to nearest interger |
| 10 - <100 | to nearest 5 |
| 100 - <1000 | to nearest 10 |
| >1000 | to nearest 100 |

**TABLE A4-1**
**METAL TEST RESULTS FOR EILs**

| Analyte / Sample Location | Depth (m) | HEAVY METALS (mg/kg) COPPER | LEAD | NICKEL | ZINC |
|---|---|---|---|---|---|
| **Western Portion** | | | | | |
| BH1 | 0.0 - 0.1 | 4 | 21 | 1.2 | 120 |
| BH2 | 0.0 - 0.1 | 1.5 | 8 | <0.5 | 35 |
| BH3 | 0.0 - 0.1 | 1.2 | 7 | <0.5 | 32 |
| BH4 | 0.0 - 0.1 | 3.2 | 16 | 1.4 | 27 |
| BH4 | 0.3 - 0.4 | <0.5 | 4 | <0.5 | 4.2 |
| BH5 | 0.0 - 0.1 | 3.3 | 86 | <0.5 | 32 |
| BH6 | 0.0 - 0.1 | 3.2 | 100 | <0.5 | 37 |
| BH7 | 0.0 - 0.1 | 3.3 | 100 | 0.7 | 36 |
| BH8 | 0.0 - 0.1 | 3.9 | 14 | 1.3 | 34 |
| BH8 | 0.4 - 0.5 | <0.5 | 3 | <0.5 | 3 |
| BH9 | 0.0 - 0.1 | 2.9 | 13 | 1 | 30 |
| BH10 | 0.0 - 0.1 | **230** | 880 | 15 | **3400** |
| BH10 | 0.6 - 0.7 | 6.8 | 31 | 0.7 | 180 |
| BH11 | 0.0 - 0.1 | **330** | **1300** | 22 | **5400** |
| BH12 | 0.0 - 0.1 | **240** | 800 | 14 | **3400** |
| BH13 | 0.0 - 0.1 | 13 | 64 | 1.2 | 75 |
| BH13 | 0.7 - 0.8 | 5.7 | 27 | 0.9 | 42 |
| BH14 | 0.0 - 0.1 | 12 | 24 | 2.2 | 73 |
| BH14 | 0.4 - 0.5 | 2.6 | 10 | 1.2 | 17 |
| BH15 | 0.0 - 0.1 | 1.9 | 4 | 1 | 11 |
| BH16 | 0.0 - 0.1 | 4.7 | 14 | 0.9 | 67 |
| BH17 | 0.0 - 0.1 | 5.1 | 15 | 1 | 44 |
| BH17 | 0.5 - 0.6 | 2.3 | 14 | 0.6 | 42 |
| BH18 | 0.0 - 0.1 | 9.9 | 13 | 5.1 | 39 |
| BH18 | 0.6 - 0.7 | 4.4 | 20 | 2.5 | 31 |
| DUPLICATE D1 | - | 12 | 14 | 3.3 | 39 |
| DUPLICATE D2 | - | 5.9 | 6 | 1.3 | 7.8 |
| SPLIT SS1 | - | 8 | 20 | 2 | 35 |
| SPLIT SS2 | - | 12 | 19 | 3 | 41 |
| Practical Quantitation Limits (PQL) | | 0.5 | 1 | 0.5 | 2 |
| ***Site Derived Ecological Investigation Levels (EIL)*** | | 95 | 1100 | 30 | 230 |

Notes a: none

**TABLE A4-2**
**METAL TEST RESULTS FOR EILs**

| Analyte / Sample Location | Depth (m) | HEAVY METALS (mg/kg) COPPER | LEAD | NICKEL | ZINC |
|---|---|---|---|---|---|
| **Eastern Portion** | | | | | |
| BH19 | 0.0 - 0.1 | 8.9 | 8 | 2.3 | 18 |
| BH20 | 0.0 - 0.1 | 4.2 | 8 | 3.9 | 26 |
| BH21 | 0.0 - 0.1 | 2.8 | 6 | 0.7 | 9.7 |
| BH22 | 0.0 - 0.1 | 2.2 | 5 | 0.5 | 8 |
| BH23 | 0.0 - 0.1 | 2.4 | 5 | <0.5 | 6.5 |
| BH24 | 0.0 - 0.1 | 5.7 | 61 | 1.4 | 61 |
| BH25 | 0.0 - 0.1 | 5.6 | 110 | 1.5 | 95 |
| BH26 | 0.0 - 0.1 | 7 | 130 | 1.3 | 120 |
| BH27 | 0.0 - 0.1 | 14 | 160 | 1.3 | 39 |
| BH28 | 0.0 - 0.1 | 16 | 21 | 1.3 | 49 |
| BH29 | 0.0 - 0.1 | 9.9 | 18 | 1.2 | 35 |
| BH30 | 0.0 - 0.1 | 11 | 19 | 1.2 | 42 |
| BH30 | 0.5 - 0.6 | 5.6 | 6 | 1.2 | 7.3 |
| BH31 | 0.0 - 0.1 | 15 | 22 | 2.1 | 43 |
| BH32 | 0.0 - 0.1 | 28 | 37 | 1.6 | 100 |
| Practical Quantitation Limits (PQL) | | 0.5 | 1 | 0.5 | 2 |
| ***Site Derived Ecological Investigation Levels (EIL)*** | | 100 | 1100 | 30 | 140 |

Notes a: none

**TABLE B1**
**TOTAL RECOVERABLE HYDROCARBONS (TRH), BTEX AND NAPHTHALENE TEST RESULTS FOR HSLs IN CLAY**

| Analyte / Sample Location | Depth (m) | TRH (mg/kg) F1 [a] | TRH (mg/kg) F2 [b] | BTEX (mg/kg) BENZENE | TOLUENE | ETHYL BENZENE | TOTAL XYLENES | NAPHTHALENE |
|---|---|---|---|---|---|---|---|---|
| BH8 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | 0.4 | <0.1 |
| BH10 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH11 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH12 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH13 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH14 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH15 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH16 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH17 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH18 | 0-0.1 | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| DUPLICATE D1 | - | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| DUPLICATE D2 | - | <25 | <25 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| SPLIT SS1 | - | <10 | <50 | <0.2 | <0.5 | <0.5 | <0.5 | <1 |
| SPLIT SS2 | - | <10 | <50 | <0.2 | <0.5 | <0.5 | <0.5 | <1 |
| Practical Quantitation Limits (PQL) | | 25 | 25 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | | | | |
| ***Health Screening Levels (HSL) - Table 1A (3)*** | | | | | | | | |
| *HSL A & HSL B: Low-high density residential* | | | | | | | | |
| Source depth - 0m to <1m | | 50 | 280 | 0.7 | 480 | NL | 110 | 5 |
| Source depth - 1m to <2m | | 90 | NL | 1 | NL | NL | 310 | NL |
| Source depth - 2m to <4m | | 150 | NL | 2 | NL | NL | NL | NL |
| Source depth - 4m + | | 290 | NL | 3 | NL | NL | NL | NL |
| *HSL C: recreational / open space* | | | | | | | | |
| Source depth - 0m to <1m | | NL | NL | NL | NL | NL | NL | NL |
| Source depth - 1m to <2m | | NL | NL | NL | NL | NL | NL | NL |
| Source depth - 2m to <4m | | NL | NL | NL | NL | NL | NL | NL |
| Source depth - 4m + | | NL | NL | NL | NL | NL | NL | NL |
| *HSL D: Commercial / Industrial* | | | | | | | | |
| Source depth - 0m to <1m | | 310 | NL | 4 | NL | NL | NL | NL |
| Source depth - 1m to <2m | | 480 | NL | 6 | NL | NL | NL | NL |
| Source depth - 2m to <4m | | NL | NL | 9 | NL | NL | NL | NL |
| Source depth - 4m + | | NL | NL | 20 | NL | NL | NL | NL |

Notes
a: To obtain F1 subtract the sum of BTEX concentrations from the $C_6$-$C_{10}$ fraction.
b: To obtain F2 subtract naphthalene from the >$C_{10}$-$C_{16}$ fraction.
NL: Not Limiting

**TABLE B2**
**TOTAL RECOVERABLE HYDROCARBONS (TRH), BTEX AND BENZO(a)PYRENE TEST RESULTS**
**ESLs FOR FINE GRAINED SOIL TEXTURE**

| Analyte / Sample Location | Depth (m) | TRH (mg/kg) | | | | BTEX (mg/kg) | | | | PAH (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F1 ($C_6$-$C_{10}$) [a] | F2 (>$C_{10}$-$C_{16}$) [b] | F3 ($C_{16}$-$C_{34}$) | F4 ($C_{34}$-$C_{40}$) | BENZENE | TOLUENE | ETHYL BENZENE | TOTAL XYLENES | BENZO(a)PYRENE |
| BH8 | 0-0.1 | <25 | <25 | 160 | <120 | <0.1 | <0.1 | <0.1 | 0.4 | <0.1 |
| BH10 | 0-0.1 | <25 | <25 | 120 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH11 | 0-0.1 | <25 | <25 | 110 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH12 | 0-0.1 | <25 | <25 | 200 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | **2.0** |
| BH13 | 0-0.1 | <25 | <25 | 110 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH14 | 0-0.1 | <25 | <25 | 250 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH15 | 0-0.1 | <25 | <25 | <90 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH16 | 0-0.1 | <25 | <25 | <90 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH17 | 0-0.1 | <25 | <25 | <90 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| BH18 | 0-0.1 | <25 | <25 | <90 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| DUPLICATE D1 | - | <25 | <25 | 96 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| DUPLICATE D2 | - | <25 | <25 | <90 | <120 | <0.1 | <0.1 | <0.1 | <0.3 | <0.1 |
| SPLIT SS1 | - | <10 | <50 | <100 | <100 | <0.2 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPLIT SS2 | - | <10 | <50 | <100 | <100 | <0.2 | <0.5 | <0.5 | <0.5 | <0.5 |
| Practical Quantitation Limits (PQL) | | 25 | 25 | 90 | 120 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | | | | | | |
| ***Ecological Screening Levels (ESL) - Table 1B (6)*** | | | | | | | | | | |
| Areas of ecological significance | | 125* | 25* | - | - | 10 | 65 | 40 | 1.6 | 0.7 |
| Urban residential and public open space | | 180* | 120* | 1300 | 5600 | 65 | 105 | 125 | 45 | 0.7 |
| Commercial and industrial | | 215* | 170* | 2500 | 6600 | 95 | 135 | 185 | 95 | 1.4 |

Notes

a: To obtain F1 subtract the sum of BTEX concentrations from the $C_6$-$C_{10}$ fraction.

b: To obtain F2 subtract naphthalene from the >$C_{10}$-$C_{16}$ fraction.

*: ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

"-": "-" indicates that insufficient data was available to derive a value.

**TABLE B3**
**TOTAL RECOVERABLE HYDROCARBONS (TRH) TEST RESULTS**
**MANAGEMENT LIMITS FOR FINE GRAINED SOIL TEXTURE**

| Analyte / Sample Location | Depth (m) | TRH (mg/kg) F1 ($C_6$-$C_{10}$) [a] | F2 (>$C_{10}$-$C_{16}$) [a] | F3 ($C_{16}$-$C_{34}$) | F4 ($C_{34}$-$C_{40}$) |
|---|---|---|---|---|---|
| BH8 | 0-0.1 | <25 | <25 | 160 | <120 |
| BH10 | 0-0.1 | <25 | <25 | 120 | <120 |
| BH11 | 0-0.1 | <25 | <25 | 110 | <120 |
| BH12 | 0-0.1 | <25 | <25 | 200 | <120 |
| BH13 | 0-0.1 | <25 | <25 | 110 | <120 |
| BH14 | 0-0.1 | <25 | <25 | 250 | <120 |
| BH15 | 0-0.1 | <25 | <25 | <90 | <120 |
| BH16 | 0-0.1 | <25 | <25 | <90 | <120 |
| BH17 | 0-0.1 | <25 | <25 | <90 | <120 |
| BH18 | 0-0.1 | <25 | <25 | <90 | <120 |
| DUPLICATE D1 | - | <25 | <25 | 96 | <120 |
| DUPLICATE D2 | - | <25 | <25 | <90 | <120 |
| SPLIT SS1 | - | <10 | <50 | <100 | <100 |
| SPLIT SS2 | - | <10 | <50 | <100 | <100 |
| Practical Quantitation Limits (PQL) | | 25 | 25 | 90 | 120 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | |
| ***Management Limits - Table 1B (7)*** | | | | | |
| Residential parkland and public open space | | 800 | 1000 | 3500 | 10,000 |
| Commercial and industrial | | 800 | 1000 | 5000 | 10,000 |

Notes

a: Separate management limits for BTEX and naphthalene are not available hence these should not be subtracted from the relevant fractions to obtain F1 and F2.

b: Management limits are applied after consideration of relevant ESLs and HSLs.

**TABLE C**

**POLYCYCLIC AROMATIC HYDROCARBONS (PAH), ORGANOCHLORINE PESTICIDES (OCP) AND POLYCHLORINATED BIPHENYLS (PCB)**
**TEST RESULTS FOR HILs, EILs & ESLs**

| Analyte / Sample Location | Depth (m) | PAH (mg/kg) | | | | Organochlorine Pesticides (mg/kg) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Carcinogenic PAHs (as BaP TEQ) [e] | TOTAL PAHs [f] | BENZO(a)PYRENE | NAPHTHALENE | DDT + DDE + DDD | ALDRIN & DIELDRIN | CHLORDANE | ENDOSULFAN | ENDRIN | HEPTACHLOR | HCB | METHOXYCHLOR | PCB [j] |
| BH1 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH2 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH3 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH4 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH5 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH6 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH7 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH8 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH9 | 0-0.1 | - | - | - | - | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH10 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH11 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH12 | 0-0.1 | 2.7 | 20 | **2.0** | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH13 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH14 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH15 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH16 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH17 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| BH18 | 0-0.1 | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | <1 |
| DUPLICATE D1 | - | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | - |
| DUPLICATE D2 | - | <0.2 | <0.8 | <0.1 | <0.1 | <0.3 | <0.3 | <0.2 | <0.4 | <0.2 | <0.1 | <0.1 | <0.1 | <1 |
| SPLIT SS1 | - | 0.6 | <0.5 | <0.5 | <0.5 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.2 | - |
| SPLIT SS2 | - | 0.6 | <0.5 | <0.5 | <0.5 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.2 | <0.1 |
| Practical Quantitation Limits (PQL) | | 0.2 | 0.8 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 1 |
| **NATIONAL ENVIRONMENT PROTECTION MEASURE (2013)** | | | | | | | | | | | | | | |
| ***Health Investigation Levels (HIL) - Table 1A (1)*** | | | | | | | | | | | | | | |
| HIL A [a] | | 3 | 300 | | | 240 | 6 | 50 | 270 | 10 | 6 | 10 | 300 | 1 |
| HIL B [b] | | 4 | 400 | | | 600 | 10 | 90 | 400 | 20 | 10 | 15 | 500 | 1 |
| HIL C [c] | | 3 | 300 | | | 400 | 10 | 70 | 340 | 20 | 10 | 10 | 400 | 1 |
| HIL D [d] | | 40 | 4000 | | | 3600 | 45 | 530 | 2000 | 100 | 50 | 80 | 2500 | 7 |
| ***Ecological Investigation Levels (EIL) - Table 1B (5)*** | | | | | | | | | | | | | | |
| Areas of ecological significance | | | | | 10 [g] | 3 [g, k] | | | | | | | | |
| Urban residential and public open space [h] | | | | | 170 [g] | 180 [g, k] | | | | | | | | |
| Commercial and industrial | | | | | 370 [g] | 640 [g, k] | | | | | | | | |
| ***Ecological Screening Levels (ESL) - Table 1B (6)*** | | | | | | | | | | | | | | |
| Areas of ecological significance | | | | 0.7 [i] | | | | | | | | | | |
| Urban residential and public open space | | | | 0.7 [i] | | | | | | | | | | |
| Commercial and industrial | | | | 1.4 [i] | | | | | | | | | | |

Notes a: Residential with garden/accessible soil (home grown poduce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.

**TABLE D**
**ASBESTOS TEST RESULTS**

| Sample Location | Date Sampled | Depth (m) | Field Observations* Visible ACM detected (>7mm) | Material Sampled for Analysis | Laboratory Results Asbestos Present / Absent | Type of Asbestos Present | Laboratory Results Asbestos %w/w |
|---|---|---|---|---|---|---|---|
| BH1 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH2 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH3 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH4 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH5 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH6 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH7 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH8 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH9 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| **BH10** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile & Amosite Asbestos detected** | **AF** | **0.02%** |
| **BH11** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile & Amosite Asbestos detected** | **AF** | **0.01%** |
| **BH12** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile & Amosite Asbestos detected** | **AF** | **0.01%** |
| **BH12** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile & Amosite Asbestos detected** | **ACM** | **0.01%** |
| BH13 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH14 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| **BH15** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile & Amosite Asbestos detected** | **AF** | **0.005%** |
| BH16 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| **BH17** | **09.10.2024** | **0-0.1** | **No visible ACM observed** | **Soil** | **Chrysotile, Amosite & Crocidolite Asbestos detected** | **AF** | **0.001%** |
| BH18 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH19 | 09.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH20 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH21 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH22 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH23 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH24 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH25 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH26 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH27 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH28 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH29 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH30 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH31 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| BH32 | 10.10.2024 | 0-0.1 | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| DUPLICATE D1 | 09.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| DUPLICATE D2 | 09.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| DUPLICATE D3 | 10.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| DUPLICATE D4 | 10.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| SPLIT SS1 | 09.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |
| SPLIT SS2 | 09.10.2024 | - | No visible ACM observed | Soil | No Asbestos detected | - | <0.001 |

**WA Guidelines for the Assessment, Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009**
**National Environment Protection (Assessment of Site Contamination) Measure 2013 Schedule B1**

# APPENDIX P

## QA/QC ASSESSMENT



# 1 FIELD DATA QUALITY ASSESSMENT SOILS

## 1.1 Field Data Completeness

| Field Sample Category - Soils | Number (Target) | Non-conformances | Number (Useable) | Overall Completeness % |
|---|---|---|---|---|
| Primary Samples | 40 | 0 | 40 | 100% |
| Intra-Lab Duplicates | 2 | 0 | 2 | 100% |
| Inter-Lab Duplicates | 2 | 0 | 2 | 100% |
| Rinsate Blanks | 2 | 0 | 2 | 100% |
| Trip Spikes | 2 | 0 | 2 | 100% |
| Trip Blank | 2 | 0 | 2 | 100% |

**Note:** (*) – Overall Completeness is calculated as a percentage of the number of useable samples over the target number of samples required. The required percentage completeness is specified in the DQOs.

| Field Consideration | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were all critical locations sampled? | Y | All critical locations were sampled as per the DQOs. |
| Were all samples collected from critical densities and depths? | Y | All sampled were recovered as per DQOs. |
| Were the Standard Operating Procedures (SOPs) appropriate and complied with? | Y | The Aargus Fieldwork Protocols were appropriate and complied with. |
| Were the samplers adequately experienced? | Y | Sampling was conducted by Aargus Environmental Engineer, Harsha Muthu |
| Was field documentation complete and correct? | Y | Field records can be found within Appendix L of the report. |
| Were an adequate number of intra-laboratory duplicate samples collected? | Y | 100% of intra-laboratory duplicate samples required were collected as the table above. |
| Were an adequate number of inter-laboratory duplicate samples collected? | Y | 100% of inter-laboratory duplicate samples required were collected as per the table above. |
| Were an adequate number of rinsate samples collected? | Y | 100% of rinsate samples required were collected as per the table above. |
| Were an adequate number of trip blanks collected? | Y | 100% of trip blanks required were collected as per the table above. |
| Were an adequate number of trip spikes collected? | Y | 100% of trip blanks required were collected as per the table above. |

## 1.2 Field Data Comparability

| Field Consideration | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the same SOPs used on each occasion? | Y | Aargus Fieldwork Protocols were utilised throughout each sampling event. |
| Was all sampling undertaken by the same person? | Y | Sampling was undertaken by Harsha Muthu |
| Could climatic conditions (such as temperature, rainfall, etc.) influence data comparability? | N | All sampling was undertaken on a sunny day. |
| Were the same types of samples collected (filtered, size, fractions, etc.) for each media? | Y | Samples were collected in the same types of containers provided by the laboratory. |
| Was each field parameter measured using the same equipment? | Y | Headspace analysis was carried out using the same PID meter. |
| Was the same method and equipment used for extraction of samples? | Y | Soil samples were recovered by the same method. |

## 1.3 Field Data Representativeness

| Laboratory Batch | Laboratory | Sample Medium | Container Breakages | Sample Preservation | Headspace / Temperature |
|---|---|---|---|---|---|
| SE272613 | SGS Sydney | Soil and Water (rinsate) | Compliant | Compliant | Compliant |
| ES2433991 | ALS Sydney | Soil | Compliant | Compliant | Compliant |
| ASET121874 | ASET Laboratory | Soil | Compliant | Compliant | Compliant |

| Field Consideration | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Was appropriate media sampled in accordance with the DQOs? | Y | All soil samples were sampled in accordance with the DQOs. |
| Was all media identified in the DQOs sampled? | Y | All soil samples specified in the DQO were sampled. |
| Were all samples the samples appropriately handled? | Y | All samples collected were received by the laboratories intact. |
| Were all samples preserved appropriately? | Y | All samples collected were placed in ice boxes with ice bricks to preserve the samples.<br>Where relevant, samples were stored in acid-preserved containers supplied by laboratories. |

## 1.4 Field Data Precision

| Field Consideration | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the SOPs appropriate and complied with? | Y | The recovery of field duplicates was conducted in accordance with Aargus Fieldwork Protocols to allow for the assessment of field precision. |

## 1.5 Field Data Accuracy

| Field Consideration | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the SOPs appropriate and complied with? | Y | The recovery of a trip blank and a spike sample was conducted in accordance with Aargus Fieldwork Protocols to allow for the assessment of field accuracy. |

# 2 LABORATORY DATA QUALITY ASSESSMENT

## 2.1 Laboratory Data Completeness

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were all critical samples analysed according to the DQOs? | Y | All critical samples analysed according to DQOs. |
| Were all analytes analysed according to the DQOs? | Y | All analytes analysed according to DQOs. |
| Were the laboratory methods and PQLs appropriate? | Y | US EPA Analytical Methods were used.<br>PQLs were below their respective assessment criteria |
| Was sample documentation complete? | Y | The sample documentation was correctly completed on the COC's. |
| Were sample holding times complied with? | Y | All the samples were within holding time for soil samples. |
| Were an adequate number of laboratory duplicates analysed? | Y | An adequate number of laboratory duplicates were analysed for soil samples. |
| Were an adequate number of laboratory blank samples analysed? | Y | An adequate number of laboratory blank samples were analysed. |
| Were an adequate number of Laboratory Control Samples analysed? | Y | An adequate number of Laboratory Control Samples were analysed. |
| Were an adequate number of laboratory matrix spikes/duplicates analysed? | Y | An adequate number of Matrix spikes / duplicates were analysed. |
| Were an adequate number of surrogates analysed? | Y | An adequate number of surrogates were analysed. |

## 2.2 Laboratory Data Comparability

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the same analytical methods used for each analyte? | Y | All analytical methods used between laboratories were based on the USEPA/APHA methods. |
| Were the PQLs used for each analyte less than 20% of their respective assessment criteria? | Y | The PQLs for analytes in soil samples were below 20% of their respective assessment criteria. |
| Were the sample PQLs used for each analyte the same? | N | Sample PQL's were the same within each laboratory, but different between primary and secondary laboratories.<br>However, the PQLs used were below the assessment criteria and hence will not affect the assessment outcome. |
| Were the same laboratories used for analyses of each contaminant type? | Y | SGS Sydney was the primary laboratory.<br>ALS Sydney was the secondary laboratory. |

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| | | ASET was the primary laboratory for asbestos. |
| Were the units reported for each analyte the same? | Y | Analytical units of measurement for soil were mg/kg, %wt/wt and mg/L or µg/L for the rinsate sample |

## 2.3 Laboratory Data Representativeness

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were all samples analysed according to the DQOs? | Y | The majority of the samples were analysed according to the proposal. |

## 2.4 Laboratory Data Precision

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the RPDs of the field duplicates within control limits? | N | All field duplicate results were within control limit, <50%, with the exception of:<br>- Chromium, Copper & Nickel in BH8/D1<br>- Arsenic, Copper, Lead, Nickel & Zinc in BH18/D2<br>- Chromium & Copper in BH8/SS1<br>- Nickel in BH18/SS2<br>Due to sample heterogeneity and/or low concentrations detected.<br>The exceedances were considered not to affect the adequacy of the sample results since the collected data is above 95% accuracy. |
| Were the RPDs of the laboratory duplicates within control limits? | N | RPDs of the laboratory duplicates were within control limits, with the exception of:<br>- Fluoranthene, Pyrene & Total PAH (18) in SE272613.042 / LB327025.025<br>Due to sample heterogeneity and/or low concentrations detected.<br>The exceedances were considered not to affect the adequacy of the sample results since the collected data is above 95% accuracy. |

**Note:** Please refer to the tables attached at the end of this QA/QC assessment for calculations of the field RPDs.

## 2.5 Laboratory Data Accuracy

| Laboratory Considerations | Yes / No | Comments / Non-Conformances |
|---|---|---|
| Were the rinsates free of contaminants? | Y | The concentrations of the analytes were below or equal to the PQLs, and the data set was considered to be adequately accurate. |
| Were the trip blanks free of contaminants? | Y | The test results for the trip blank samples, reported concentrations to be less than the PQL's, therefore cross contamination has not occurred. |
| Were the laboratory blanks free of contaminants? | Y | Laboratory blanks were free of contaminants. |
| Were the surrogate spikes within control limits? | N | Used surrogate spikes were within control limits, with the exception of:<br>- BH14 0.0-0.1 / SE272613.018<br>At least 2 of 3 surrogates are within acceptance criteria. |
| Were laboratory control samples within control limits? | Y | Laboratory control samples were within control limits. |
| Were matrix spike recoveries within control limits? | N | The matrix spike recoveries were within control limits, with the exception of:<br>- Zinc in SE272613.001 / LB327032.004<br>- TRH C29-C36 & TRH >C16-C34 (F3) in SE272613.009 / LB327025.027<br>Recovery failed acceptance criteria due to sample heterogeneity. |
| Were the trip spike recoveries within the control limits? | Y | The trip spike recoveries were within the control limits therefore the data set was considered suitable for interpretation |

**Note:** Please refer to the tables attached at the end of this QA/QC assessment for tables showing results of field blanks.

## TABLE 1
## DUPLICATE SAMPLE

| ANALYTE | BH8 0-0.1m mg/kg | DUPLICATE D1 mg/kg | RELATIVE PERCENTAGE DIFFERENCE % |
|---|---|---|---|
| **HEAVY METALS** | | | |
| Arsenic | 2 | 2 | 0 |
| Cadmium | <0.3 | <0.3 | - |
| Chromium | 4.7 | 12 | 87 |
| Copper | 3.9 | 12 | 102 |
| Lead | 14 | 14 | 0 |
| Mercury | <0.05 | <0.05 | - |
| Nickel | 1.3 | 3.3 | 87 |
| Zinc | 34 | 39 | 14 |
| **TOTAL PETROLEUM HYDROCARBONS (TPH)** | | | |
| C6 - C10 | <25 | <25 | - |
| C10 - C16 | <25 | <25 | - |
| C16 - C34 | 160 | 96 | 50 |
| C34-C40 | <120 | <120 | - |
| **BTEX** | | | |
| Naphthalene | < 0.1 | < 0.1 | |
| Benzene | < 0.1 | < 0.1 | - |
| Toluene | < 0.1 | < 0.1 | - |
| Ethyl Benzene | < 0.1 | < 0.1 | - |
| Total Xylenes | < 0.3 | < 0.3 | - |
| **POLYCYCLIC AROMATIC HYDROCARBONS (PAH)** | | | |
| B(a)P as TEQ | <0.2 | <0.2 | - |
| Total PAH | <0.8 | <0.8 | - |
| Benzo(a)pyrene | <0.1 | <0.1 | - |
| Naphthalene | <0.1 | <0.1 | - |
| **ORGANOCHLORINE PESTICIDES (OCP)** | | | |
| DDD + DDE + DDT | <0.3 | <0.3 | - |
| Aldrin + Dieldrin | <0.3 | <0.3 | - |
| Chlordane | <0.2 | <0.2 | - |
| Endosulfan | <0.4 | <0.4 | - |
| Endrin | <0.2 | <0.2 | - |
| Heptachlor | <0.1 | <0.1 | - |
| HCB | <0.1 | <0.1 | - |
| Methoxychlor | <0.1 | <0.1 | - |

## TABLE 2
## DUPLICATE SAMPLE

| ANALYTE | BH18 0-0.1m mg/kg | DUPLICATE D2 mg/kg | RELATIVE PERCENTAGE DIFFERENCE % |
|---|---|---|---|
| **HEAVY METALS** | | | |
| Arsenic | 4 | 2 | 67 |
| Cadmium | <0.3 | <0.3 | - |
| Chromium | 15 | 16 | 6 |
| Copper | 9.9 | 5.9 | 51 |
| Lead | 13 | 6 | 74 |
| Mercury | <0.05 | <0.05 | - |
| Nickel | 5.1 | 1.3 | 119 |
| Zinc | 39 | 7.8 | 133 |
| **TOTAL PETROLEUM HYDROCARBONS (TPH)** | | | |
| C6 - C10 | <25 | <25 | - |
| C10 - C16 | <25 | <25 | - |
| C16 - C34 | <90 | <90 | - |
| C34-C40 | <120 | <120 | - |
| **BTEX** | | | |
| Naphthalene | < 0.1 | < 0.1 | |
| Benzene | < 0.1 | < 0.1 | - |
| Toluene | < 0.1 | < 0.1 | - |
| Ethyl Benzene | < 0.1 | < 0.1 | - |
| Total Xylenes | < 0.3 | < 0.3 | - |
| **POLYCYCLIC AROMATIC HYDROCARBONS (PAH)** | | | |
| B(a)P as TEQ | <0.2 | <0.2 | - |
| Total PAH | <0.8 | <0.8 | - |
| Benzo(a)pyrene | <0.1 | <0.1 | - |
| Naphthalene | <0.1 | <0.1 | - |
| **ORGANOCHLORINE PESTICIDES (OCP)** | | | |
| DDD + DDE + DDT | <0.3 | <0.3 | - |
| Aldrin + Dieldrin | <0.3 | <0.3 | - |
| Chlordane | <0.2 | <0.2 | - |
| Endosulfan | <0.4 | <0.4 | - |
| Endrin | <0.2 | <0.2 | - |
| Heptachlor | <0.1 | <0.1 | - |
| HCB | <0.1 | <0.1 | - |
| Methoxychlor | <0.1 | <0.1 | - |
| **POLYCHLORINATED BIPHENYLS (PCB)** | | | |
| Total PCB | < 1 | < 1 | - |

## TABLE 3
## SPLIT SAMPLE

| ANALYTE | BH8 0-0.1m mg/kg SGS SYDNEY | SPLIT SS1 mg/kg ALS SYDNEY | RELATIVE PERCENTAGE DIFFERENCE (RPD) % |
|---|---|---|---|
| **HEAVY METALS** | | | |
| Arsenic | 2 | <5 | - |
| Cadmium | <0.3 | <1 | - |
| Chromium | 4.7 | 10 | 72 |
| Copper | 3.9 | 8 | 69 |
| Lead | 14 | 20 | 35 |
| Mercury | <0.05 | <0.1 | - |
| Nickel | 1.3 | 2 | 42 |
| Zinc | 34 | 35 | 3 |
| **TOTAL PETROLEUM HYDROCARBONS (TPH)** | | | |
| C6 - C10 | <25 | <10 | - |
| C10 - C16 | <25 | <50 | - |
| C16 - C34 | 160 | <100 | - |
| C34-C40 | <120 | <100 | - |
| **BTEX** | | | |
| Naphthalene | < 0.1 | <1 | - |
| Benzene | < 0.1 | <0.2 | - |
| Toluene | < 0.1 | <0.5 | - |
| Ethyl Benzene | < 0.1 | <0.5 | - |
| Total Xylenes | < 0.3 | <0.5 | - |
| **POLYCYCLIC AROMATIC HYDROCARBONS (PAH)** | | | |
| B(a)P as TEQ | <0.2 | 0.6 | - |
| Total PAH | <0.8 | <0.5 | - |
| Benzo(a)pyrene | <0.1 | <0.5 | - |
| Naphthalene | <0.1 | <0.5 | - |
| **ORGANOCHLORINE PESTICIDES (OCP)** | | | |
| DDD + DDE + DDT | <0.3 | <0.05 | - |
| Aldrin + Dieldrin | <0.3 | <0.05 | - |
| Chlordane | <0.2 | <0.05 | - |
| Endosulfan | <0.4 | <0.05 | - |
| Endrin | <0.2 | <0.05 | - |
| Heptachlor | <0.1 | <0.05 | - |
| HCB | <0.1 | <0.05 | - |
| Methoxychlor | <0.1 | <0.2 | - |

## TABLE 4
## SPLIT SAMPLE

| ANALYTE | BH18 0-0.1m mg/kg SGS SYDNEY | SPLIT SS2 mg/kg ALS SYDNEY | RELATIVE PERCENTAGE DIFFERENCE (RPD) % |
|---|---|---|---|
| **HEAVY METALS** | | | |
| Arsenic | 4 | <5 | - |
| Cadmium | <0.3 | <1 | - |
| Chromium | 15 | 11 | 31 |
| Copper | 9.9 | 12 | 19 |
| Lead | 13 | 19 | 38 |
| Mercury | <0.05 | <0.1 | - |
| Nickel | 5.1 | 3 | 52 |
| Zinc | 39 | 41 | 5 |
| **TOTAL PETROLEUM HYDROCARBONS (TPH)** | | | |
| C6 - C10 | <25 | <10 | - |
| C10 - C16 | <25 | <50 | - |
| C16 - C34 | <90 | <100 | - |
| C34-C40 | <120 | <100 | - |
| **BTEX** | | | |
| Naphthalene | < 0.1 | <1 | - |
| Benzene | < 0.1 | <0.2 | - |
| Toluene | < 0.1 | <0.5 | - |
| Ethyl Benzene | < 0.1 | <0.5 | - |
| Total Xylenes | < 0.3 | <0.5 | - |
| **POLYCYCLIC AROMATIC HYDROCARBONS (PAH)** | | | |
| B(a)P as TEQ | <0.2 | 0.6 | - |
| Total PAH | <0.8 | <0.5 | - |
| Benzo(a)pyrene | <0.1 | <0.5 | - |
| Naphthalene | <0.1 | <0.5 | - |
| **ORGANOCHLORINE PESTICIDES (OCP)** | | | |
| DDD + DDE + DDT | <0.3 | <0.05 | - |
| Aldrin + Dieldrin | <0.3 | <0.05 | - |
| Chlordane | <0.2 | <0.05 | - |
| Endosulfan | <0.4 | <0.05 | - |
| Endrin | <0.2 | <0.05 | - |
| Heptachlor | <0.1 | <0.05 | - |
| HCB | <0.1 | <0.05 | - |
| Methoxychlor | <0.1 | <0.2 | - |
| **POLYCHLORINATED BIPHENYLS (PCB)** | | | |
| Total PCB | < 1 | <0.1 | - |

**TABLE 5**
**RINSATE SAMPLE**

| ANALYTE | Practical Quantitation Limits (PQL) | RINSATE R1 (µg/L) 09.10.2024 | RINSATE R2 (µg/L) 10.10.2024 |
|---|---|---|---|
| **HEAVY METALS** | | | |
| Arsenic | 1 | <1 | <1 |
| Cadmium | 0.1 | <0.1 | <0.1 |
| Chromium | 1 | <1 | <1 |
| Copper | 1 | <1 | <1 |
| Mercury | 0.1 | <0.1 | <0.1 |
| Nickel | 1 | <1 | <1 |
| Lead | 1 | <1 | <1 |
| Zinc | 5 | <5 | <5 |

**TABLE 6**
**TRIP SPIKE SAMPLES**

| ANALYTE | TRIP SPIKE % 09.10.2024 | TRIP SPIKE % 10.10.2024 |
|---|---|---|
| **TRH** | | |
| C6-C10 | - | - |
| **BTEX** | | |
| Naphthalene | - | - |
| Benzene | 101 | 121 |
| Toluene | 98 | 108 |
| Ethyl Benzene | 99 | 114 |
| o-Xylene | 99 | 111 |
| m&p-Xylenes | 100 | 109 |

## TABLE 7
## TRIP BLANKS SAMPLES

| ANALYTE | TRIP BLANK (mg/kg) 09.10.2024 | TRIP BLANK (mg/kg) 10.10.2024 | Practical Quantitation Limits (PQL) |
|---|---|---|---|
| **TRH** | | | |
| C6-C10 | <20 | <20 | 20 |
| **BTEX** | | | |
| Naphthalene | <0.1 | <0.1 | 0.1 |
| Benzene | <0.1 | <0.1 | 0.1 |
| Toluene | <0.1 | <0.1 | 0.1 |
| Ethyl Benzene | <0.1 | <0.1 | 0.1 |
| m&p-Xylenes | <0.2 | <0.2 | 0.2 |
| o-Xylene | <0.1 | <0.1 | 0.1 |

# APPENDIX Q

## IMPORTANT INFORMATION ABOUT YOUR REPORT



# IMPORTANT INFORMATION ABOUT YOUR ENVIRONMENTAL SITE ASSESSMENT

These notes have been prepared by Aargus (Australia) Pty Ltd and its associated companies using guidelines prepared by ASFE (The Association) of Engineering Firms Practising in the Geo-sciences. They are offered to help you in the interpretation of your Environmental Site Assessment (ESA) reports.

## REASONS FOR CONDUCTING AN ESA

ESA's are typically, though not exclusively, carried out in the following circumstances:

- as pre-acquisition assessments, on behalf of either purchaser or vender, when a property is to be sold;
- as pre-development assessments, when a property or area of land is to be redeveloped or have its use changed for example, from a factory to a residential subdivision;
- as pre-development assessments of greenfield sites, to establish "baseline" conditions and assess environmental, geological and hydrological constraints to the development of, for example, a landfill; and
- as audits of the environmental effects of an ongoing operation.

Each of these circumstances requires a specific approach to the assessment of soil and groundwater contamination. In all cases however, the objective is to identify and if possible quantify the risks that unrecognised **c**ontamination poses to the proposed activity. Such risks may be both financial, for example, cleanup costs or limitations on site use, and physical, for example, health risks to site users or the public.

## THE LIMITATIONS OF AN ESA

Although the information provided by an ESA could reduce exposure to such risks, no ESA, however, diligently carried out can eliminate them. Even a rigorous professional assessment may fail to detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled.

## AN ESA REPORT IS BASED ON A UNIQUE SET OF PROJECT SPECIFIC FACTORS

Your environmental report should not be used:

- when the nature of the proposed development is changed, for example, if a residential development is proposed instead of a commercial one;
- when the size or configuration of the proposed development is altered;
- when the location or orientation of the proposed structure is modified;
- when there is a change of ownership
- or for application to an adjacent site.

To help avoid costly problems, refer to your consultant to determine how any factors, which have changed subsequent to the date of the report, may affect its recommendations.

## ESA "FINDINGS" ARE PROFESSIONAL ESTIMATES

Site assessment identifies actual subsurface conditions only at those points where samples are taken, when they are taken. Data derived through sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists who then render an opinion about overall subsurface conditions, the nature and extent of contamination, its likely impact on the proposed development and appropriate remediation measures. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to help minimise its impact. For this reason owners should retain the services of their consultants

through the development stage, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

## SUBSURFACE CONDITIONS CAN CHANGE

Natural processes and the activity of man change subsurface conditions. As an ESA report is based on conditions, which existed at the time of subsurface exploration, decisions should not be based on an ESA report whose adequacy may have been affected by time. Speak with the consultant to learn if additional tests are advisable.

## ESA SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Every study and ESA report is prepared in response to a specific brief to meet the specific needs of specific individuals. A report prepared for a consulting civil engineer may not be adequate for a construction contractor, or even some other consulting civil engineer. Other persons should not use a report for any purpose, or by the client for a different purpose. No individual other than the client should apply a report even apparently for its intended purpose without first conferring with the consultant. No person should apply a report for any purpose other than that originally contemplated without first conferring with the consultant.

## AN ESA REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when design professionals develop their plans based on misinterpretations of an ESA. To help avoid these problems, the environmental consultant should be retained to work with appropriate design professionals to explain relevant findings and to review the adequacy of their plans and specifications relative to contamination issues.

## LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Final borehole or test pit logs are developed by environmental scientists, engineers or geologists based upon their interpretation of field logs (assembled by site personnel) and laboratory evaluation of field samples. Only final logs customarily included in our reports. These logs should not under any circumstances be redrawn for inclusion in site remediation or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimise the possibility of contractors misinterpreting the logs during bid preparation. When this occurs, delays, disputes and unanticipated costs are the all-too-frequent result.

To reduce the likelihood of boring log misinterpretation, the complete report must be available to persons or organisations involved in the project, such as contractors, for their use. Those who o not provide such access may proceed under the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing all the available information to persons and organisations such as contractors helps prevent costly construction problems and the adversarial attitudes that may aggravate them to disproportionate scale.

## READ RESPONSIBILITY CLAUSES CLOSELY

Because an ESA is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in transmittals. These are not exculpatory clauses designed to foist liabilities onto some other party. Rather, they are definitive clauses that identify where your consultant’s responsibilities begin and end. Their use helps all parties involved recognise their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your ESA report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.