

DETAILED SITE INVESTIGATION (DSI)

48 CAMPBELL STREET
LOT 2 / DP 1168922
GERRINGONG, NSW 2534

Prepared For:	**Allen Price & Scarratts c/ Pearce & Campbell**
Project Number:	**ENR2069**
Date:	**February 2022**

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EXECUTIVE SUMMARY

Environment & Natural Resource Solutions (ENRS) were commissioned as independent environmental consultants in October 2021 by *Allen Price & Scarratts*, on behalf of *Pearce & Campbell* (the Client) to conduct a Detailed Site Investigation (DSI) for part of the property located at 48 Campbell Street, Gerringong, NSW, 2534 (*herein referred to as the Site*).

ENRS understand this assessment has been undertaken to form part of the Elambra West Urban Release Planning Proposal (Allen Price & Scarratts, 2020) and to address recommendations provided within the Stage 1 Preliminary Site Investigation (PSI) previously conducted for the Site (Construction Sciences, 2021).

ENRS understand that the Site has an extended history of agricultural land use. Given the proposed change in land use and zoning, this assessment is required to assess the potential for ground contamination consistent with *NSW State Environmental Planning Policy No. 55 (SEPP55)*, to address Ministerial Direction 2.6 – Contaminated Land, and to meet *Kiama Municipal Council* Local Environmental Pan (LEP, 2014) requirements.

This report documents the results of available Site historical records, test pit investigations, environmental sampling and National Association of Testing Authorities (NATA) accredited laboratory analysis in general accordance with National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), and the guidelines made and approved under Section 105 of the *Contaminated Land Management Act* 1997 (the Act), namely the Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 2020).

The aim of this DSI was to provide comprehensive information through desktop studies and on-site investigations to characterise the type, extent, and level of contamination at the Site, if any. Provide a statement regarding the suitability of the Site for the proposed future land-use in accordance with SEPP55 and/ or recommendations for further investigations or remediation, if required.

The scope of work for the project comprised the following tasks:

- Review available Site history records incorporating previous environmental investigation reports, proposed development plans, publicly available data (including aerial photographs, geological maps, topographical maps, and registered groundwater bore database), Council and NSW EPA records to identify any past or present potentially contaminating activities and or any potential Areas of Environmental Concern (AECs);
- Site works (19/01/2021 – 18/01/2022) – supervise the excavation of ninety (90) test pits and four (4) surface water sampling points. Environmental sampling including the collection of soil and representative material samples;
- Submit selected samples to a NATA accredited laboratory for analysis;
- Conduct Tier 1 screening of NATA analysis results against *NSW EPA* endorsed Site Assessment Criteria (SAC); and
- Document investigation results in the form of a DSI report with assessment of Site suitability and recommendations for additional investigation works and environmental management, if required.

Based on the available information reviewed and site-specific data collected during the scope of works the following conclusions and recommendations are provided:

- The tasks completed during this investigation have met the project objectives set out in **Section 1.2**;
- Site history records documented in the PSI (CS;2021) indicated that the site has been used for rural-residential purposes since circa 1949. Between 1949 and 2010, the demolition and construction of multiple buildings across the Site had occurred;
- Based on the proposed development of a residential subdivision, the appropriate Site Assessment Criteria (SAC) adopted for this assessment was ASC NEPM HIL 'A' (2013) for residential land use with accessible soil;
- NATA accredited laboratory results for CoPC including TRHs, BTEX, PAHs, heavy metals, pesticides, and pathogens were generally reported below the SAC. Chemical exceedances of the adopted SAC were reported in three (3) areas of the Site; AEC-R02, AEC-R05 and AEC-R06, as summarised in **Table 17** and **Figure 7**;
- NATA accredited laboratory results for asbestos identification and asbestos in soil reported multiple positive detections across the Site. Asbestos impacted soils were identified in the following areas of the Site; AEC-R01, AEC-R03, AEC-R04, AEC-R05, AEC-R06 and AEC-R07, as summarised in **Table 17** and **Figure 9**;
- AEC-R04 was reported to contain friable asbestos associated with historical fragments weathered in gravel. All other AECs containing asbestos containing materials were assessed as non-friable (bonded)
- Based on the result of this DSI, the Areas of Environmental Concern (AECs) and extent of contamination identified at the Site included the following revised AECs. Revised AECs are also outlined in **Figure 10**.
    - **AEC-R01**: ~1,000m^2 of shallow asbestos impacted soils on the southern side of the Sites northern residential dwellings. AEC-R01 comprised preliminary AECs AEC13, AEC22 and AEC24.
    - **AEC-R02**: ~40m^3 stockpile of soil, vegetation, and non-putrescible waste with heavy fraction (C16-C34) hydrocarbons. AEC-R02 comprised preliminary AEC36.
    - **AEC-R03**: ~400m^2 of uncontrolled fill and reworked natural ground within the centre of the Site. Isolated fragments of non-friable ACM and one (1) presumed isolated pocket of historical fill with chemical exceedances of SAC. AEC-R03 comprised preliminary AEC17.
    - **AEC-R04**: ~500m^2 of aggregate roadway with laboratory exceedance of friable asbestos. Depth of asbestos impacted gravel varied between 0.2 and 0.5mbgl. AEC-R04 comprised part of preliminary AEC33.
    - **AEC-R05**: ~4,700m^2 of shallow asbestos impacted soils within the centre of the Site with chemical exceedances of SAC. Depth of asbestos impacted soils varied between 0.1 and 0.5mbgl. AEC-05 comprised preliminary AECs AEC5, AEC14, AEC15, AEC18, AEC19, AEC20, AEC21, AEC29 and AEC31.

- **AEC-R06**: ~600m^2 of historical, uncontrolled Fill within and adjacent to a localised waterway on the eastern boundary of the Site. Non-friable ACM and chemical exceedances of SAC reported within soil samples from the Fill. Chemical exceedances of SAC also reported in surface water samples from the waterway. AEC-R06 comprised preliminary AEC35.
- **AEC-R07**: ~4,200m^2 of livestock yards surrounding the Sites previously operational dairy. AEC-R07 characterised by two (2) separated areas; cattle holding/feeding yards with exposed surface soils and a grassed horse paddock. Chemical exceedances of SAC reported, and two (2) isolated ACM fragments of unknown origin identified. AEC-R07 comprised part of former AEC28.

- Groundwater was not encountered during the scope of works and no further assessment was triggered based on the shallow nature of AECs in soil and associated surface water not in hydraulic connection with the deep underlying fracture rock aquifers;
- Based on the results of this DSI, the Site is assessed to comprise seven AECs with shallow soil and associated surface water, and is capable of being made suitable for the proposed development in accordance with NSW State Environmental Planning Policy No. 55 (SEPP55) pending the completion of remediation works and subsequent validation of the revised Areas of Environmental Concern as delineated in **Figure 10**.

Based on the findings of this DSI, the following recommendations are provided:

- Restrict access to AEC-R04 pending a clearance certificate. The area is required to be made safe in general accordance with the SafeWork NSW Code of Practice (2019) 'How to Safely Remove Asbestos' as summarised in **Appendix H**.
- Disturbance of materials with potential to disturb friable asbestos should be supervised by a Class 'A' licenced asbestos removal contractor and bonded / non-friable work by a Class 'B', in accordance with the Code of Practise; How to safely remove asbestos (SafeWork NSW, 2019);
- Avoid disturbance of remaining AECs where non-friable asbestos containing materials were identified;
- Select an appropriate remediation method for the reported exceedances deemed not suitable for residential land use and the proposed development. Based on the detection for both bonded and friable asbestos, a combination of the three (3) methods below may be considered feasible. Consideration should be given to quantities of material, regulatory requirements, impacts on future works and land values. Appropriate remediation methods may include;
  - Excavation and offsite disposal;
  - Excavation and onsite encapsulation; or
  - Manual emu picking of asbestos fragments.
- Preparation of a Remediation Action Plan (RAP) by a suitably qualified environmental consultant which documents the selected remediation methodology, validation requirements for the identified exceedances. The RAP should be approved by the regulator prior to commencement of site works;

- Remediation works, as specified in the RAP, to be completed and validated prior to the submission of the Subdivision Application to Kiama Municipality Council;
- In the event that material is required to be disposed off-Site, materials must be accompanied by a Waste Classification Certificate in accordance with the NSW EPA Waste Classification Guidelines (2016) prepared by a suitably licenced environmental professional;
- Should any change in Site conditions or incident occur which causes a potential environmental impact, a suitable environmental professional should be engaged to further assess the Site and consider requirements for any additional assessment; and
- This report must be read in conjunction with the attached Statement of Limitations.

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1.0 INTRODUCTION

1.1 BACKGROUND

Environment & Natural Resource Solutions (ENRS) were commissioned as independent environmental consultants in October 2021 by *Allen Price & Scarratts*, on behalf of *Pearce & Campbell* (the Client) to conduct a Detailed Site Investigation (DSI) for part of the property located at 48 Campbell Street, Gerringong, NSW, 2534 (*herein referred to as the Site*).

ENRS understand this assessment has been undertaken to form part of the Elambra West Urban Release Planning Proposal (Allen Price & Scarratts, 2020) and to address recommendations provided within the Stage 1 Preliminary Site Investigation (PSI) previously conducted for the Site (Construction Sciences, 2021).

ENRS understand that the Site has an extended history of agricultural land use. Given the proposed change in land use and zoning, this assessment is required to assess the potential for ground contamination consistent with *NSW State Environmental Planning Policy No. 55 (SEPP55)*, to address Ministerial Direction 2.6 – Contaminated Land, and to meet *Kiama Municipal Council* Local Environmental Pan (LEP, 2014) requirements.

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1.2 OBJECTIVES

The aim of this DSI was to provide comprehensive information through desktop studies and on-site investigations to characterise the type, extent, and level of contamination at the Site, if any. Provide a statement regarding the suitability of the Site for the proposed future land-use in accordance with SEPP55 and/ or recommendations for further investigations or remediation, if required.

1.3 SCOPE OF WORK

The scope of work for the project comprised the following tasks:

- Review available Site history records incorporating previous environmental investigation reports, proposed development plans, publicly available data (including aerial photographs, geological maps, topographical maps, and registered groundwater bore database), Council and NSW EPA records to identify any past or present potentially contaminating activities and or any potential Areas of Environmental Concern (AECs);
- Site works (19/01/2021 – 18/01/2022) – supervise the excavation of ninety (90) test pits and four (4) surface water sampling points. Environmental sampling including the collection of soil and representative material samples;

- Submit selected samples to a NATA accredited laboratory for analysis;
- Conduct Tier 1 screening of NATA analysis results against *NSW EPA* endorsed Site Assessment Criteria (SAC); and
- Document investigation results in the form of a DSI report with assessment of Site suitability and recommendations for additional investigation works and environmental management, if required.

2.0 SITE DESCRIPTION

2.1 SITE IDENTIFICATION

The Site is located on the south-western boundary of the Gerringong township, between the Princes Highway and Union Way, as shown in **Figure 1**. The key features required to identify the Site are summarised in **Table 1** below.

Table 1: Site Identification

SITE	DESCRIPTION
Site Name	Elambra West
Street Address	48 Campbell Street, Gerringong, NSW, 2534.
Site Description	Primarily grassed agricultural land with two (2) residential dwellings, associated farming infrastructure and access roads.
Property Description	As above. Reader referred to **Section 2.2**.
Current Certificates of Title	Not considered necessary for the purposes of this assessment, previously provided within PSI (Construction Sciences, 2021)
Lot / Deposited Plan	Lot 2 / DP1168922
Easting/Northing (GHA94)	Easting: 300277, Northing: 6152375
Current Owners	Mr Neil Campbell
Current Occupiers	Mr Neil Campbell and Family
Site Area (combined)	Total Lot area ~ 46 ha. Subject Site ~ 14 ha.
Current Zoning	RU2 – Rural Landscape (Kiama LEP 2011). Reader referred to **Section 2.3**.
Local Government Area	Kiama Municipality Council
Locality Map	Kiama 9028-1S and Gerroa 9028-2N
Trigger for assessment	Proposed redevelopment for residential land use.
Local Council **statutory controls** (if any)	CLM Act 1997; *NSW State Environmental Planning Policy No. 55 (SEPP55)*; Kiama Municipality Council Local Environment Plans (LEPs) (2009), associated Development Control Plans (DCPs).

SITE	DESCRIPTION
Legal permissions to Access the Site obtained or required	Works commissioned by *Allen Price & Scarratts* as project managers on behalf of the landowner, Mr Neil Campbell and Client.
Consent of adjoining land owners and/or occupiers to access land (if required)	Not Required for this assessment

2.2 SITE LAYOUT

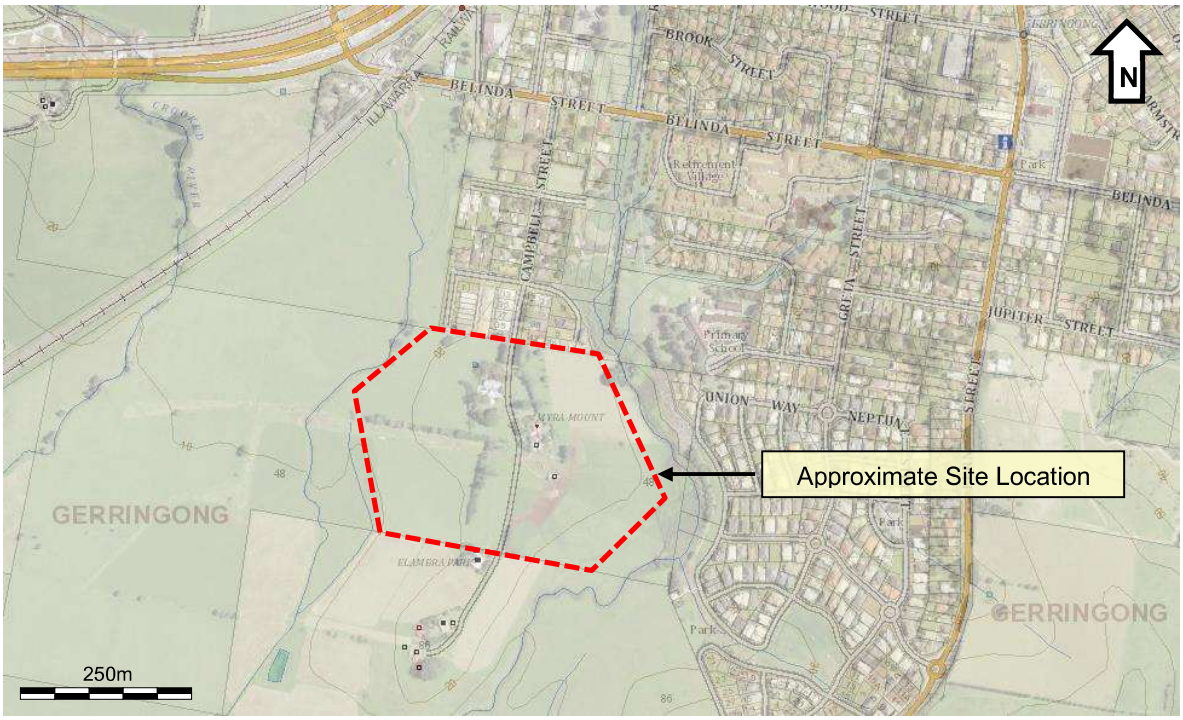
The following points outline the Site layout at the time of this investigation. A Site layout plan is provided in **Figure 5** with a photographic record of Site conditions tabled in **Appendix E**.

- At the time of this investigation, the Site was being used for residential and agricultural purposes;
- The portion of the Lot subject to this investigation (the Site) comprised two (2) residential dwellings, multiple outbuildings / sheds and associated farming equipment and infrastructure;
- The Site surface consisted primarily of open agricultural land with some access roads and areas of gravel pavement surrounding structures and dwellings;
- Areas of vegetation (trees, shrubs and gardens) were present around the residential dwellings, along roadways and fence lines throughout the property;
- Access to the site was via Campbell Street, which bisected the centre of the Site in a north-south direction; and
- The Site was located on an area of undulating topography, with the residential dwellings and surrounding structures of the Site located on a localised topographic high.

2.3 ZONING

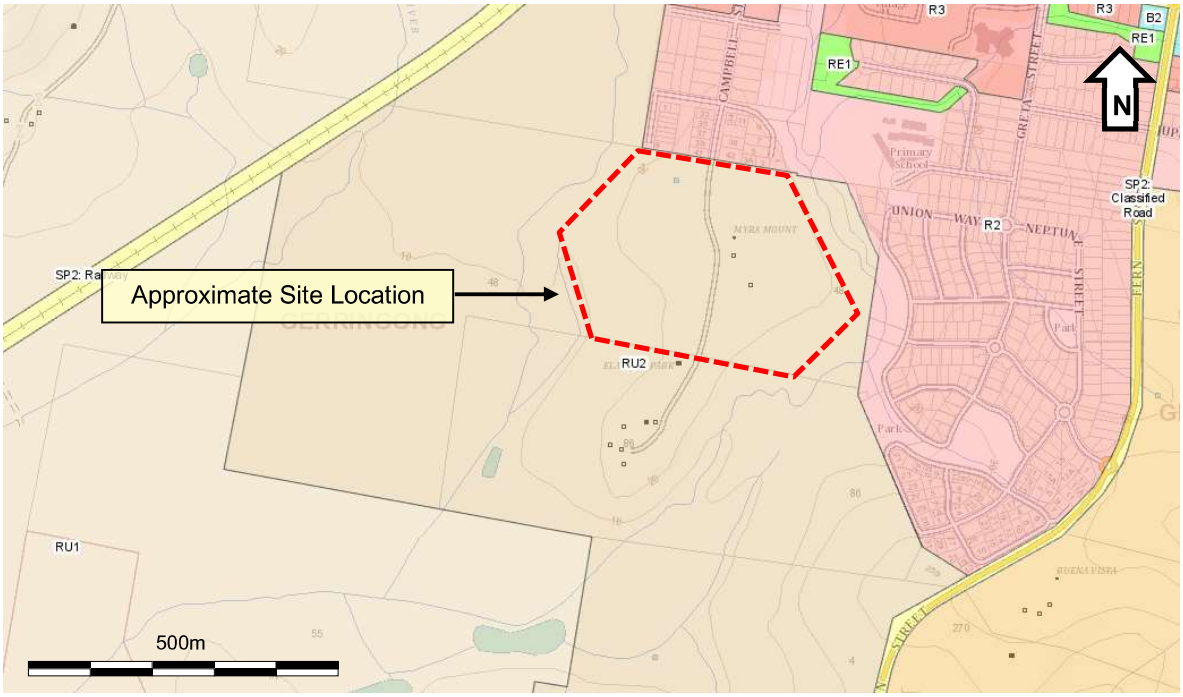
The Site was zoned as RU2 – Rural Landscape under the Kiama Local Environmental Plan (LEP) 2011, as shown in **Figure 2**. State and Local Government planning records including historical zoning maps were not reviewed during this scope of works as available historical aerial imagery, title searches and business directories were sufficient to document the Site's historical land use.

Figure 1: Site Location Map



Source: https://maps.six.nsw.gov.au/ (cited 15/11/2021)

Figure 2: Land Use Zoning Map



Source: https://www.planningportal.nsw.gov.au/spatialviewer (cited 15/11/2021)

2.4 TOPOGRAPHY

A review of the Site topography was conducted with reference to current series topographic maps (Kiama 9028-1S and Gerroa 9028-2N). The centre of the Site is situated on a localised high point, with an approximate elevation of 28m AHD. The eastern and western portions of the Site slope downgradient towards the waterways adjacent to their respective boundaries. The low point in the eastern portion of the Site was at an elevation of 12m AHD, while the low point in the western portion of the Site was at an elevation of 10m AHD.

The regional gradient is expected to dip to the south-west towards Crooked River located approximately 2 kilometres from the Site. Surface water runoff from the Site, if any, is expected to be captured by the tributaries of Crooked River located alongside the Sites eastern and western boundaries.

2.5 GEOLOGY

A review of the geological setting was conducted with reference to the Shellharbour-Kiama 1:50,000 geological series sheet. The Site was primarily mapped as underlain by Permian sedimentary rocks and minor volcanic rocks (Ps), including sandstone, conglomerate, shale and coal measures. The eastern boundary of the Site is mapped as underlain by Quaternary floodplains (Qap) comprising silt, clay, fluvial sand and gravel. The western boundary of the Site is mapped as underlain by Quaternary alluvial and colluvial fan (Qavf) comprising fluvial sand, silt, gravel and clay.

In undisturbed areas of the Site, test pit investigations by ENRS (19-20/11/2021) encountered silty sands (topsoil) overlying red – brown sandy clays to maximum investigation depths of 1.1 metres below ground level. Subsurface conditions were characteristic of the mapped volcanic geology of the area. Test pit and borehole logs are provided in **Appendix D.**

2.6 POTENTIAL ACID SULFATE SOIL ASSESSMENT (PASSA)

A desktop assessment was conducted for Potential Acid Sulfate in Soil (PASS) with reference to the eSPADE online Acid Sulfate Soil Risk maps. The Site is mapped within a '*Not Assessed*' area, with areas of no known occurrence mapped 400m of the Site, as shown in **Figure 3** below. High probability areas were located ~400m south-west of the Site within areas surrounding the headwaters of Crooked River. Based on the Sites relatively high position in the landscape, the mapped records and absence of field indicators during soil sampling, the proposed development area of the Site was considered unlikely to present a risk of PASS. Hence, no further assessment was considered necessary.

Figure 3: Potential Acid Sulfate Soil Map



Source: eSpade. www.environment.nsw.gov.au (cited 15/11/2021)

2.7 HYDROGEOLOGY

Based on the Site geology, groundwater in the area is expected to be associated with the following aquifer systems;

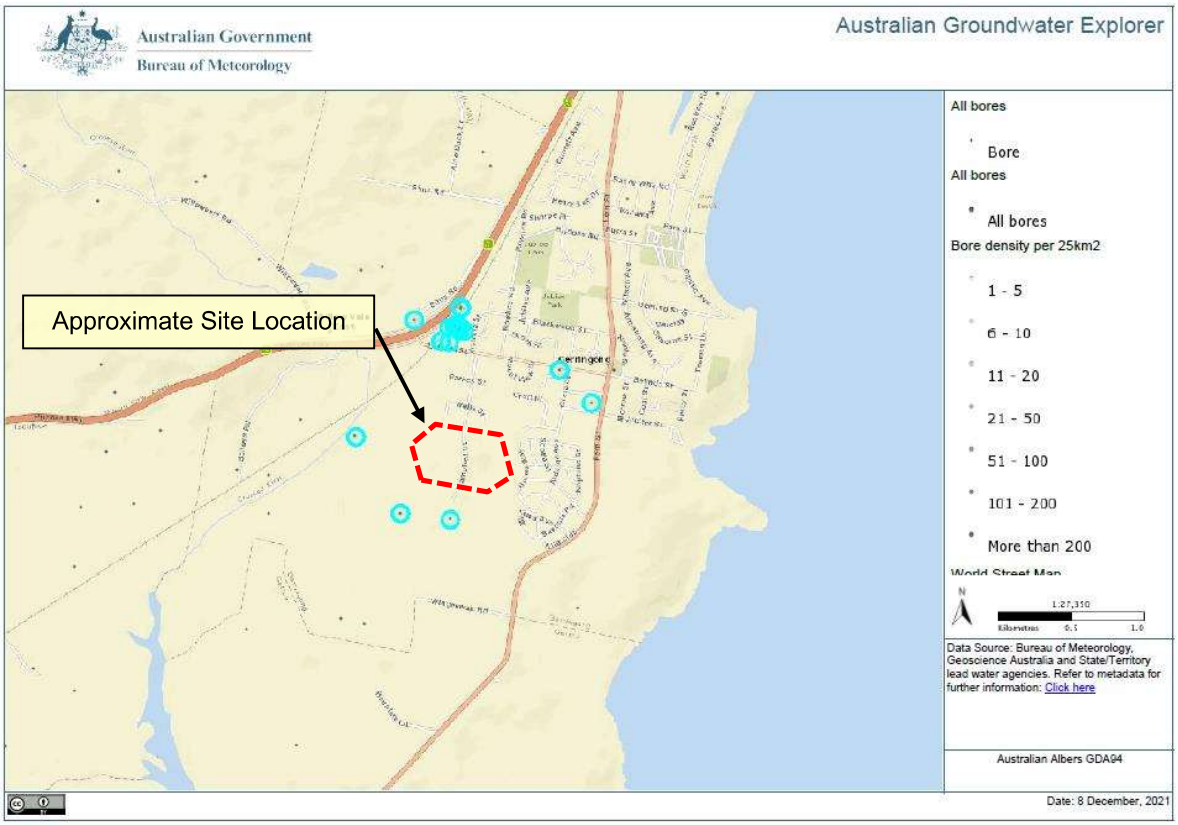
- Shallow unconfined systems hosted in the unconsolidated sands and sediments with a shallow water table generally less than 20 mbGL; (groundwater flow expected to mimic surrounding topography and flow south towards Mullet Creek)
- Deep fractured rock systems hosted in the underlying rock formations with a deeper water table generally greater than 20mbGL or at depths greatly below the zone of disturbance for this project.

Groundwater flow within the Site is inferred to flow south-west towards Crooked River. Regional groundwater flow is also expected to flow to the south south-west.

No groundwater was intersected during test pit investigations to depths of 1.1mbgl. Hence, the groundwater table was considered to be at sufficient depths below the potential sources of contamination at the Site.

Further review of the Australian government Bureau of Meteorology (BOM) online Australian Groundwater Explorer database identified twenty (20) registered bores within one (1) kilometre radius of the Site. The well locations are depicted in **Figure 4**. The closest mapped bores were located approximately 200m downgradient (south-west and south-east) from the Site. The existing bores are registered for water supply, irrigation, stock & domestic and monitoring purposes.

Figure 4: Registered Groundwater Bore Locations



Source: http://www.bom.gov.au/water/groundwater/explorer/map.shtml (cited 12/08/2021).

3.0 SITE HISTORY (SUMMARY)

3.1 PREVIOUS REPORTS

ENRS understands that the Site has been the subject of the following previous assessment/s, as summarised below;

- Preliminary Site Investigation (PSI). *Construction Sciences,* 28/09/2021.

The following **sub-section 3.1.1** summarises the results of the PSI.

3.1.1 Preliminary Site Investigation (PSI). *Construction Sciences* 28/09/2021:

- Construction Sciences (CS) were engaged by Allen Price & Scarratts Pty Ltd, to undertake a Stage 1 Preliminary Site Investigation (PSI) for land located at 48 Campbell Street, Gerringong, NSW, 2534.
- The PSI assessed part of (14 Ha) the Lot which is planned for re-zoning and development.
- The scope of works included the desktop review of Site historical records and a Site walkover to identify Areas of Environmental Concern (AECs).

- The Site history review identified the potential for land contaminating activities to have been undertaken on the Site, specifically farming and agricultural activities, demolition/construction of buildings, the construction of a roadway and the construction of a dam.
- A search of NSW EPA record did not identify any contaminated land records at the Site;
- In total, the PSI identified thirty-three (33) AECs that required further investigation, as summarised below:
  - AEC01 – AEC12: Stockpiling of material (various)
  - AEC13 – AEC25: Areas of potential uncontrolled fill (various)
  - AEC26: Septic system
  - AEC27: Dam water
  - AEC28: Livestock holding pen
  - AEC29 – AEC31: Historical building footprints (various)
  - AEC33: Asphalt / gravel roadway.
- The PSI provided the following conclusions and recommendations:
  - A Stage 2 Detailed Site Investigation (DSI) should be undertaken at the Site to further assess potential contamination risks associated with the identified AECs, and to further assess the suitability of the Site, from a contamination perspective, for the proposed land use; and
  - The Stage 2 DSI should be undertaken by a suitably experienced environmental consultant.

3.2 HISTORICAL TITLES

A search of prior and cancelled land titles was undertaken within the Preliminary Site Investigation (Construction Sciences, 2021) to document the timeline of previous landowners and their occupation which provides an indication of potential contaminating activities associated with previous land use.

Review of available historical titles identified that 48 Campbell Street has been used for residential and agricultural purposes since circa 1963. A summary of historical titles, as compiled by Construction Sciences (2021), is provided in **Table 2** below. Records from the title search are contained in the PSI (CS;2021).

Table 2: Summary of Historical Titles

Date	Owner	Occupation
1912 - 1929	Unknown – private owners.	Unknown.
1929 - 1968	Unknown	Farmers
1968 - 1974	Unknown – private owners	Unknown
1974 - 2004	Sunnymead Holdings Pty Ltd	Unknown

Date	Owner	Occupation
2004 - Current	Unknown – private owners	Unknown

3.3 HISTORICAL AERIAL IMAGERY

Historical aerial photographs of the Site area were reviewed within the PSI (CS; 2021) to identify potential contaminating land use and relevant changes in site conditions. Copies of the imagery are provided in the PSI (CS:2021). The key observations made from aerial imagery are summarised in **Table 3**.

Table 3: Summary of Historical Aerial Photography

Year	Description of site condition and surrounding land use
1949	*"The site appears to be a rural residential property. Scattered buildings likely to comprise residential dwellings and sheds are evident in the central northern, central eastern, south eastern and south central areas of the site. What appears to be ground clearance is also seen within the south-western corner of the site."*
1963	*"Slight increase in the number of buildings/dwellings onsite. What appears to be a dirt road is seen running in a north-south direction across the site."*
1972	*"Some buildings/sheds located within the south eastern area of the site appears to have been demolished. Large portion of land located to the west of the dirt roadway appears to have been disturbed, likely for agricultural purposes."*
1979	*"No significant change since previous image with the exception of what appears to be dwelling present within the southern portion of the site."*
1984	*"No significant change since previous image."*
1993	*"Roadway running down the centre of the site in a north-south direction appears to have been covered with hardstand asphalt"*
2005	*"Building located within the southern portion of the site (as seen in 1979 photo) appears to have been demolished. A dam is present within the north-western portion of the site (i.e. to the north west of a dwelling within the northern portion of the site)."*
2010	*"Some buildings/sheds located within the central-eastern portion of the site appears to have been demolished. No other significant change since the previous image."*
2021	*"Additional buildings have been constructed in areas where demolished buildings were observed in 2010 image. The number of buildings on site and their layout appears to be similar to the layout of existing buildings onsite."*

3.4 DANGEROUS GOODS LICENSE & UPSS RECORDS

A registered search of SafeWork NSW records for licences to keep dangerous goods was NOT considered necessary for this DSI. Review of previous environmental investigations, historical titles, business directories, Council notifications, aerial photography and site inspections were considered adequate to identify any past or present Underground Petroleum Storage Systems (UPSS) and chemical storage facilities at the Site. No evidence of UPSS infrastructure was observed at the Site.

3.5 NSW EPA RECORDS

A search of the NSW EPA Contaminated Land register was conducted with the aim to assess the presence of contaminated land in the area. The search did not identify properties within a 5 km radius of the Site listed within the register, as provided in **Table 4** below.

Table 4: NSW EPA Contaminated Land List



Search results

Your search for: Suburb: GERRINGONG

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

3.6 FORMER LICENSED ACTIVITIES UNDER POEO ACT 1997

A review of former licenced activities under the POEO Act 1997 was conducted from available records. No records were found within the Site or within a distance with risk of impacting the Site. A summary is provided in **Table 5** below.

Table 5: Former Licenced Activities Under POEO Act 1997

Number	Name	Location	Type	Status	Issued date
1508757	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	25 Sep 2012
1512461	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	04 Mar 2013
3085769812	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	Penalty Notice	Issued	02 Apr 2013
1515590	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	30 Jul 2013
1520647	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	07 Mar 2014
1526433	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	19 Nov 2014
1528614	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	20 Feb 2015
1529410	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	25 Mar 2015
1530517	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	14 May 2015
1531640	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	02 Jul 2015
1532759	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	14 Sep 2015
1537012	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.58 Licence Variation	Issued	07 Jan 2016
1538462	FULTON HOGAN CONSTRUCTION PTY LTD	446 Princes Highway, GERRINGONG, NSW 2534	s.80 Surrender of a Licence	Issued	26 Feb 2016
1535315	NOWRA RUBBER CO PTY LTD	73 Rowlins Road, GERRINGONG, NSW 2534	s.91 Clean Up Notice	Issued	10 Nov 2015

08 December 2021

3.7 PFAS INVESTIGATION AND MANAGEMENT PROGRAMS

A review of PFAS investigation and management programs was not conducted as part of this assessment. No evidence of PFAS contributing factors were identified within previous environmental investigations, historical titles, EPA records, aerial photography, or Site inspections. Hence, no further assessment of PFAS related contamination at the Site is considered necessary.

3.8 UPSS RECORDS

The Site inspections conducted by ENRS on the ***19th – 20th November 2021*** did not identify any evidence of UPSS at the Site. Review of available historical information did not identify any records of UPSS at the Site. Hence, no further assessment of UPSS records was considered necessary.

3.9 UNDERGROUND SERVICE PLANS

The location of underground services can provide conduits and preferential pathways for contaminant migration into or from a Site. Service excavations and trenches may also comprise historical fill that may require management as waste.

A Dial Before You Dig (DBYD) search was undertaken to compile underground service plans. Investigations identified. Underground utilities for power and water were identified to intersect the Site. Underground services were identified to be localised for residential supply purposes only, and were considered unlikely to pose a significant environmental risk to the Site.

3.10 DATA INTEGRITY ASSESSMENT

Where available this Site history assessment has utilised formal sources of information issued by local government (Council), SafeWork NSW, NSW EPA and NSW Land & Property Information providers. The records demonstrate a consistent timeline of land use activities and layout with no significant data gaps or inconsistencies to trigger further historical investigations. Hence, the sources and content of this assessment maybe considered to provide a reliable and satisfactory level of accuracy to support this Site history assessment and the identification of potential sources of environmental contamination.

3.11 SITE HISTORY SUMMARY

Based on this review of previous reports and the available historical records ENRS understand that;

- The Site has been used for rural-residential and agricultural purposes circa 1949, with buildings (inferred to be residential dwellings and sheds) scattered on the property;
- Between 1949 and 2010, the demolition and construction of multiple buildings across the Site had occurred;
- The Preliminary Site Investigation *(Construction Sciences, 2021)* identified a total of thirty three (33) Areas of Environmental Concern, as summarised below:
  - AEC01 – AEC12: Stockpiling of material (various)
  - AEC13 – AEC25: Areas of potential uncontrolled fill (various)
  - AEC26: Septic system
  - AEC27: Dam water
  - AEC28: Livestock holding pen
  - AEC29 – AEC31: Historical building footprints (various)
  - AEC33: Asphalt / gravel roadway.
- Following discussions with the landowner, ENRS were made aware that one (1) area of the Creek on the eastern boundary of the property may have been subject to historic placement of material;
- Review of available records including; NSW EPA, UPSS, PFAS management programs and licensed activities under *POEO Act 1997* did not identify any records at the Site; and
- The Site was considered to present a low to negligible risk for Acid Sulfate Soils.

4.0 SITE CONDITION & SURROUNDING ENVIRONMENT

The following **Table 6** outlines the observed Site conditions and surrounding environment at the time of this investigation based on the requirements of the ASC NEPM Field Checklist for 'Site Information'. A Site layout plan is provided in **Figure 5** with a photographic record of Site conditions tabled in **Appendix E**.

Table 6: Summary of observed Site Conditions & Surrounding Environment

	ITEM	DESCRIPTION	
1.	Site inspection (date, by whom)	Ground investigations works by Christopher Allen on ***19-20/11/2021.***	
2.	Topography of site and in relation to surrounding land	The centre of the Site is situated on a localised high point. The Site slopes downgradient to the east and west towards tributaries of Crooked River.	
3.	Elevation	Review of the topographic maps and survey plan indicated the site elevation is generally between 10-28 m Australian Height Datum (AHD).	
4.	Position on slope (e.g. Crest, upper slope, mid slope, lower slope, flat), including direction	Site encompasses various slope positions from centralised high to low points at the east and west.	
5.	Quantification of slope (if required) as percentage slope	General slope estimated to be approximately 5% dipping east and west.	
6.	Summary of local meteorology - nearby weather stations (e.g. Annual range in monthly temperature, precipitation, seasonal variations)	Based on data obtained through BOM climate statistics for Kiama (Bombo Headland) (Station ID 068242) for the period of 2001 - 2021, the mean maximum temperature is 25.1°C (January) and the mean minimum temperature is 10.1°C (July). Mean maximum rain fall is 148.3mm (March) and mean minimum rainfall is 50.7mm (September) with an annual rainfall of 1037.3mm.	
7.	Climatic conditions	Variable – Dry/partly cloudy 19/11/2021, heavy rain 20/11/2021.	
8.	Current land use	Mixed: Rural-residential and agricultural.	
9.	Surrounding land uses (north, south, east, west) noting apparent condition.	**North:**	Adjacent residential dwellings, further onto an area of mixed zoning, South Coast Train Line and the Princes Highway.

ITEM	DESCRIPTION	
	East:	Localised drainage feature (tributary of Crooked River) onto adjacent residential dwellings (Elambra Estate).
	South:	Agricultural / rural-residential land.
	West:	Agricultural / rural-residential land, localised drainage feature, onto the Train Line corridor and Princes Highway.
10. Density of residential use in surrounding area	R2 low density residential.	
11. Boundary conditions	Site was clearly delineated with boundary fencing or geographical boundaries.	
12. Location and conditions of all visible features, including current buildings and surface structures, roads, foundations, positions of former buildings, tanks, pits, wells, drains and bores	➢ Two (2) residential dwellings and multiple sheds/outbuildings associated with rural/agricultural land use. ➢ Two (2) former building locations ➢ Access roads/tracks present throughout Site. Some areas of gravel/hardstand.	
13. Site building information:		
➢ Occupancy and use of buildings	Two (2) residential buildings both occupied.	
➢ Age of buildings	1940's – 1970's	
➢ Construction of buildings including materials (e.g. Wood frame), openings (e.g. Windows, doors), and height (e.g. One storey, multistorey)	Single storey, varied construction types.	
➢ Number of storeys	Single storey.	
➢ Height of storeys	Unknown.	
➢ Foundation type (e.g. Basement, crawlspace, slab on ground), if combination then percentage	Unknown.	
➢ Depth below grade to base of foundation	Unknown.	
➢ Foundation construction for both floor and subsurface walls (e.g. Poured concrete, concrete block, brick, timber)	Unknown.	
➢ General condition of foundation (cracks, openings)	Unknown.	

	ITEM	DESCRIPTION
	➢ Elevator shafts	Presumed no.
	➢ Sub-slab ventilation systems or moisture vapour barriers below buildings	Unknown.
	➢ Sumps or drains or wells inside buildings	Unknown.
	➢ Attached garage	Yes (carports)
	➢ Below building parking	No.
	➢ Chemical use and storage	No significant chemical storage observed.
	➢ Type of cooling and heating systems (e.g. Natural gas, oil, radiant, steam, electrical)	Unknown.
	➢ Equipment location (e.g. Basement, crawl space, roof)	Unknown.
	➢ Air intake and exhaust units	Unknown.
	➢ Source of return air (e.g. Inside air, outside air, combination)	Unknown.
	➢ System design consideration relation to indoor air pressure (e.g. Positive pressure is often the case for commercial buildings)	Unknown.
14.	Condition & type of surface cover e.g. Bare ground, asphalt, concrete, gravel etc & estimate of percentage of site occupied by buildings, landscaped areas, paved or non-paved areas	Approximately 5% of Site area occupied by buildings / landscaped. Surface cover observed to vary – hardstand, gravel/aggregate, grassland and vegetated areas.
15.	Chemical storage & transfer areas, including the presence of waste or chemical containers	No significant chemical storage observed.
16.	Details of above ground & underground storage systems & associated infrastructure (number, location, capacity, contents, age, construction, condition, bunding & spill control)	None observed, no records identified and landowner indicated none present.
17.	Underground storage tanks (USTs)- product stored, volume, direct or remote fill points, dispenser bowsers, contained or uncontained fill points, underground piping and ventilation	None observed or previously licensed.

	ITEM	DESCRIPTION
	points, dip stick volume gauge, age of tank, records of spills or stock loss	
18.	Above ground storage tanks (ASTs)- product stored, volume, remote fill, bunded or un-bunded containment area, staining within bund, staining outside bund, bund plug in place, staining around bund plug, nearby drains, record of spills or stock losses	None observed or previously licensed.
19.	Evidence of debris, waste disposal, lagoons, drums, chemical storage or other indicators of potential contamination sources	Areas of building rubble/non-putrescible waste stockpiled around the Site. Soil/gravel containing fragments of asbestos cement sheeting observed. Uncontrolled fill present in creek on eastern boundary.
20.	Locations of settlement ponds	Non observed
21.	Description and location of services and utilities including on-site septic systems	On-Site septic system observed to the west of one (1) of the residential dwellings.
22.	Identification of electrical transformers/substation/capacitors	Non observed
23.	Odours	No olfactory evidence of contamination noticed during Site inspections.
24.	Visible signs of contamination such as discolouration or staining on the surface of soil or water, bare soil patches - on-site and at site boundaries	Fragments of ACM observed in multiple locations across the Site. Uncontrolled fill with non-putrescible waste stockpiled across Site & in creek.
25.	Presence of any stockpiled material, imported soil or fill material as well as any signs of settlement, subsidence or disturbed ground	Yes – stockpiled material and areas of fill present within the Site. See Figures within report attachments.
26.	Vegetation type and extent of cover (e.g. Scattered, sparse, dense, absent, invasive, native)	Site primarily covered by grassed agricultural land. Some large trees present, with other vegetation surrounding structures or along boundary / fence lines.
27.	Condition of vegetation (noting visibly distressed, disturbed or dead vegetation)	None observed.

	ITEM	DESCRIPTION
28.	Assessment of soil loss or deposition that has occurred in the past and evaluation of the future erosion potential	None observed.
29.	Visible signs of erosion (on and off-site)	None observed.
30.	Surface water bodies (e.g. Lakes, rivers, streams, wetlands), fresh/marine and distance from site	One (1) farm dam located in the north-west of the Site. One localised waterway, a tributary of Crooked River, bordered the Sites eastern boundary.
31.	Surface water drainage (e.g. Drainage bores, soak wells, sumps), run-off & identification of ponding areas (& potential for flooding)	Surface water runoff expected to be captured by localised waterways which are present on the eastern and western boundaries of the Site (tributaries of Crooked River).
32.	Direction of flow of water runoff from the site & adjacent properties	As above.
33.	Depth of any standing water, the direction and rate of flow of rivers, streams or canals, together with their flood levels & any tidal inundations	Flow direction of waterways inferred south towards to Crooked River.
34.	Surface water and groundwater use on site including rate and location of abstractions (current and historical)	Unknown.
35.	Evidence of possible naturally occurring contaminants	Non observed
36.	Identification of environmentally sensitive or significant features or habitats	Non observed.
37.	Evidence chemical substances have migrated or are likely to have migrated to a neighbouring site and is or is likely to be causing contamination of the neighbouring property	None observed.
38.	Photographs of site & surrounding adjacent land, showing significant features, topography, nature of surface & existing structures)	Refer to photographic log or Site conditions attached (**Appendix E**).
39.	Differences between current site condition and site history	Demolition and removal of al site buildings and fracture during 2021.

5.0 CONCEPTUAL SITE MODEL (PRELIMINARY)

The NSW EPA contaminated sites guidelines reference the *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*. The ASC NEPM (2013) recommends a tiered approach to risk assessment of ground contamination and the development of an appropriate Conceptual Site Model (CSM). The CSM describes the source(s) of contamination, the pathway(s) by which contaminants may migrate through the various environmental media, and the populations (receptors, human or ecological) that may potentially be exposed. The following sub-sections outlines the key elements of the ***CSM*** subject of this assessment. A preliminary Conceptual Site Model is depicted in **Figure 6** attached.

Based on the documented Site history of rural and agricultural land use, the PSI documented potential for ground contamination at the Site. The identified areas of environmental concern (AECs) and extent of potential contamination is presented in Conceptual Site Model (CSM) below.

5.1 SOURCES / POTENTIAL CONTAMINANTS

Based on Site history documented in **Section 3.0** and current land use, the Areas of Environmental Concern (AECs) and Contaminants of Potential Concern (CoPC) identified in the PSI are outlined in **Table 7** below.

Table 7: Preliminary AECs and CoPC

Preliminary Areas of Environmental Concern (AEC)	Historical Activities	CoPC
pAEC01 Soil Stockpile	Stockpiling of soil	• Heavy Metals (Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc & Mercury) (8 HM). • Total Recoverable Hydrocarbons (TRH). • Polycyclic Aromatic Hydrocarbons (PAHs). • Benzene, Toluene, Ethylbenzene, Xylene (BTEX); • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Polychlorinated Biphenyls (PCBs) • Asbestos.
pAEC02 Organic Stockpile	Stockpiling of organic matter	• Aesthetics
pAEC03 Organic Stockpile	Stockpiling of organic matter	• Aesthetics
pAEC04 Organic Stockpile	Stockpiling of soil	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.

Preliminary Areas of Environmental Concern (AEC)	Historical Activities	CoPC
pAEC05 Building Waste Stockpile	Stockpiling of building waste	• Asbestos • Aesthetics
pAEC06 Sand Stockpile	Stockpiling of sand	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC07 Soil Stockpile	Stockpiling of soil	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC08 Soil Stockpile	Stockpiling of soil	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC09 Garden Bed	Stockpiling of soil for garden use	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC10 Garden Bed	Stockpiling of soil for garden use	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC11 Garden Bed	Stockpiling of soil for garden use	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC12 Soil Stockpile	Stockpiling of soil	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC13 Fill Area 1	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC14 Fill Area 2	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC15 Fill Area 3	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.

Preliminary Areas of Environmental Concern (AEC)	Historical Activities	CoPC
pAEC16 Fill Area 4	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC17 Fill Area 5	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC18 Fill Area 6	Historical uncontrolled filling, plant laydown.	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC19 Fill Area 7	Historical uncontrolled filling, storage and handling of lice and tick treatments, use of hazardous building materials, livestock effluent and termite treatment.	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos • Pathogens
pAEC20 Fill Area 8	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC21 Fill Area 9	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC22 Fill Area 10	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC23 Fill Area 11	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC24 Fill Area 12	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC25 Fill Area 13	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos • Pathogens

Preliminary Areas of Environmental Concern (AEC)	Historical Activities	CoPC
pAEC26 Septic System	Handling and storage of domestic waste effluent	• 8HM, TRH, BTEX, PAHs • Pathogens
pAEC27 Dam Water	Handling and storage of surface water	• 8HM, TRH, BTEX, PAHs • Nutrients • Pathogens
pAEC28 Livestock Holding Pen	Storage and handling of lice and tick treatments, livestock effluent.	• 8HM, TRH, BTEX, PAHs • Nutrients • Pathogens
pAEC29 Historical Building Footprint	Uncontrolled demolition	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC30 Historical Building Footprint	Uncontrolled demolition	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC31 Historical Building Footprint	Uncontrolled demolition	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC32 Historical Farming Area	Use of chemicals in farming area	• 8HM, TRH, BTEX, PAHs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP).
pAEC33 Asphalt / Gravel Roadway	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC34 Gravel Ring-Road	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs • Asbestos.
pAEC35 Creek Filling	Historical uncontrolled filling	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.
pAEC36 Waste Stockpile	Stockpiling of waste	• 8HM, TRH, BTEX, PAHs, PCBs • Pesticides: Organochlorine (OCP) and Organophosphorus (OPP). • Asbestos.

Source: based on Table J1, Appendix J, in AS4482.1 (2005).

5.2 RECEPTORS

The potential receptors have been identified based on the Site condition, adjacent and on-site land uses supported by site inspections and reviews of aerial photography and published maps. The potential receptors comprise:

- Human health – dermal / ingestion / inhalation - excavations, dust, fibres and soil gas / vapour):
  - Site personnel during Site development, any future groundworks, future site users; and
  - neighbouring properties and occupants.
- Shallow soil, groundwater and stormwater – vertical and lateral migration of contaminants (if any) and connectivity with shallow groundwater, drainage waterways and nearby tributaries; and
- Ecological receptors - flora and fauna.

5.3 PATHWAYS

Given the primary source of potential contamination is associated with generally shallow soils at the Site, the primary contaminant migration and exposure pathways for the affected media are summarised in **Table 8** below:

Table 8 Potential pathways between potential sources and receptors

Source of affected media	Pathway	Receptors	Pathway Status
near surface contaminants in soil / Fill	Dermal exposure primarily after heavy rainfall or during any site maintenance or groundworks	Site workers, maintenance personnel and site users	**Incomplete** unless disturbed
Dust or airborne contaminants	Inhalation and or ingestion primarily during site works	Site workers, maintenance personnel and site users	**Incomplete** unless disturbed
Chemical contaminants in Soil pore water and groundwater	Leaching and migration of contaminants through the vadose zone;	Site workers, maintenance personnel, site users, ecological receptors	**Incomplete** unless chemical contaminants identified in exceedance of SAC
Hazardous building materials (asbestos & metallic paint)	Inhalation and or ingestion primarily during site works	Site workers, maintenance personnel and site users	**Incomplete** unless disturbed

6.0 BASIS FOR ASSESSMENT CRITERIA

ENRS have adopted the most appropriate criteria in accordance with current state and national guidelines. Where available, Australian and NSW EPA endorsed guidelines have been referenced in preference to international standards.

6.1 NATIONAL ENVIRONMENT PROTECTION MEASURE (NEPM)

The NSW EPA has endorsed the use of the Health Investigation Levels (HILs) documented in the *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)* 'Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater'. The NEPM provide a framework for risk-based assessment of soil and groundwater contamination. HILs are provided for four (4) land use categories:

Table 9: Summary of NEPM Land use Categories

NEPM	Description of Land Use Categories
HIL A	**Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.**
HIL B	Residential B with minimal opportunities for soil access; includes buildings with fully and permanently paved yard space such as high-rise buildings and apartments.
HIL C	Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
HIL D	Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.

Given the Site proposal a residential subdivision, this assessment has adopted **NEPM HIL A** as the Site Assessment Criteria (SAC) for the area underlying, and immediately surrounding the construction footprint. Site Assessment Criteria are provided in **Table 10 – Table 12** below.

In addition to the HILs the amended ASC NEPM (2013) provides the following Site Assessment Criteria (SAC):

- ***Management Limits*** for petroleum hydrocarbon compounds (Table 1 B (7));
- ***Health Screening Levels (HSLs)*** potential vapour intrusion (Table 1A [4]) should be selected based on the; land use; medium (sand, silt, clay); and depth.
- ***Groundwater Investigation Levels (GILs)*** should be applied based on the receiving environment and groundwater resources. GILs are provided in NEPM Table 1C for; Fresh Waters; Marine Waters; and Drinking Water; and
- ***Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs)*** for common contaminants in the top 2 m of soil based on three (3) generic land use settings; areas of ecological significance; urban residential areas and public open space; and commercial and industrial land uses.

In general, soil profiles within the Site encountered topsoil overlying natural clays with a moderate plasticity. ENRS note that contaminated material within the Site has generally been limited to shallow soils less than 1mbgl. Given this information, the application of NEPM 'A' HSL for Silt (<1mbgl) for this assessment is considered appropriate. SAC for near surface silt (<1mbgl) was adopted based on the stratigraphic conditions encountered at the Site and '*top down*' nature of the potential sources of contamination.

Table 10: Site Assessment Criteria for Residential Land Use

Parameters		Units	NEPM 'A'	HIL A/B Management Limits	Maintenance Worker
Polycyclic Aromatic Hydrocarbons	Naphthalene	mg/Kg	-	-	29,000 [E]
	BaP TEQ	mg/Kg	3	-	-
	Total PAHs	mg/Kg	300	-	-
Metals & Metalloids	Arsenic	mg/Kg	100	-	-
	Cadmium	mg/Kg	20	-	-
	Chromium	mg/Kg	100	-	-
	Copper	mg/Kg	6,000	-	-
	Lead	mg/Kg	300	-	-
	Mercury	mg/Kg	40	-	-
	Nickel	mg/Kg	400	-	-
	Zinc	mg/Kg	7,400	-	-
Phenolics	T.Phenols	mg/Kg	3000	-	-
BTEX	Benzene	mg/Kg	-	-	1,100 [E]
	Toluene	mg/Kg	-	-	120,000 [E]
	Ethyl benzene	mg/Kg	-	-	85,000 [E]
	m+p-Xylene	mg/Kg	-	-	130,000 [E]
	o-Xylene	mg/Kg	-	-	130,000 [E]
Total Recoverable Hydrocarbons	F1 TRH C6-C10	mg/Kg	-	800	82,000 [E]
	F2 TRH C10-C16	mg/Kg	-	1,000	62,000 [E]
	F3 TRH C16-C34	mg/Kg	-	3,500	85,000 [E]
	F4 TRH C34-C40	mg/Kg	-	10,000	120,000 [E]
Pesticides	DDT+DDE+DDD	mg/Kg	240	-	
	Aldrin and dieldrin	mg/Kg	6	-	
	Chlordane	mg/Kg	50	-	
	Endosulfan	mg/Kg	270	-	
	Endrin	mg/Kg	10	-	
	Heptachlor	mg/Kg	6	-	

[A] NEPM (2013) Health Investigation Levels for soil contaminants *Table 1A (1).*
[B] NEPM (2013) Soil *EILs Table 1B (5).*
[C] NEPM (2013) Management limits for TRH compounds in FINE soil Table 1 B(7).
[D] NEPM (2013) Ecological Screening Levels (ESL) for TRH, BTEX & BaP compounds in soil Table 1 B(6).
[E] CRC Care (2011) Technical Report No.10 (Table A4 Soil Health Screening Levels for Direct Contact)

The ASC NEPM (2013) also provides Health Screening Levels for vapour intrusion in soil which should be considered based on the depth of soil and composition of soil medium, a summary of the adopted SAC for vapour intrusion is provided in **Table 11.**

Table 11: Soil Screening Criteria for Potential Vapour Intrusion

NEPM A mg/Kg			Benzene	Toluene	Ethyl benzene	m+p-Xylene	o-Xylene	Naphthalene	F1 C6-C10	F2 >C10-C16	F3 >C16-C34	F4 >C34-C40
NEPM HSL FOR VAPOUR INTRUSION SCREENING	SAND	0-1m	0.5	160	55	40	40	3	45	110	-	-
		1-2m	0.5	220	-	60	60	-	70	240	-	-
		2-4m	0.5	310	-	95	95	-	110	440	-	-
		>4m	0.5	540	-	170	170	-	200	-	-	-
	SILT	**0-1m**	**0.6**	**390**	**-**	**95**	**95**	**4**	**40**	**230**	**-**	**-**
		1-2m	**0.7**	**-**	**-**	**210**	**210**	**-**	**65**	**-**	**-**	**-**
		2-4m	**1**	**-**	**-**	**-**	**-**	**-**	**100**	**-**	**-**	**-**
		>4m	**2**	**-**	**-**	**-**	**-**	**-**	**190**	**-**	**-**	**-**
	CLAY	0-1m	0.7	480	-	110	110	5	50	280	-	-
		1-2m	1	-	-	310	310	-	90	-	-	-
		2-4m	2	-	-	-	-	-	150	-	-	-
		>4m	3	-	-	-	-	-	290	-	-	-

Source: adapted from NEPM (2013) Table 1A(3)

6.2 AESTHETIC CRITERIA

The ASC NEPM (2013) *Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater* advises that no numeric Aesthetic Guidelines exist; aesthetic limitations to land use is a relatively subjective determination, more-so for sensitive land use. However, the Site assessment process requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land-use and its sensitivity. General assessment considerations include:

- That chemically discoloured soils or large quantities of various types of inert refuse, particularly if unsightly, may cause ongoing concern to site users;
- The depth of the materials, including uncontrolled fill and chemical residues, in relation to the final surface of the Site; and
- The need for, and practicality of, any long-term management of foreign material including but not limited to asbestos containing materials.

6.3 ASBESTOS IN SOIL CRITERIA

The ASC NEPM (2013) *Schedule B2 - Guideline on site characterisation* documents Health Screening Levels (HSLs) for asbestos levels in soil adopted from the Western Australian Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia (WA Gov, 2021). The Guidelines only apply to asbestos materials in soils, they do not apply to asbestos or asbestos containing materials present in buildings, structures, functional pipelines etc. The NEPM guidelines define three (3) primary forms of asbestos in soil:

- ***Asbestos Containing Material (ACM)*** – non-friable matrix material generally observed as stable fragments in soil unless subjected to aggressive disturbance, prolonged saturation or fire;
- ***Fibrous Asbestos (FA)*** – friable and fibrous material. Friable asbestos materials are those that can be crumbled, pulverised or reduced to powder by hand pressure when dry; and
- ***Asbestos Fines (AF)*** – sub-7mm material including free fibre. Respirable asbestos fibres are generally greater than five micrometres long and no wider than 3 micrometres.

Table 12: Health Screening Levels for Asbestos in Soil (NEPM 2013)

Form of asbestos	Health Screening Level (HSL) (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 and AF (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.

In conjunction with the WA Gov. (2021) and NEPM (2013) guidelines, the *2014 WorkCover NSW managing asbestos in or on soil* document, documents *that 'materials below 0.5m should not* be *disturbed*'. As such, the criteria to be adopted requires no asbestos within a depth of 0.5m of the potential depth of disturbance. To avoid future potential disturbance of asbestos materials that may arise, this 0.5m depth may be extended past proposed excavations.

6.4 WASTE CLASSIFICATION CRITERIA

Liquid and non-liquid waste designated for disposal shall be assessed in accordance with the NSW EPA Waste Classification Guidelines (EPA;2014) and Addendum 1 (EPA;2016) which documents values for classifying waste by chemical assessment for PFAS. Guidelines are defined for the specific contaminant concentration (SCC) and the toxicity characteristics leaching procedure (TCLP). To establish soil waste classification using both SCC and TCLP, the test values for each chemical contaminant must be compared with the threshold values set in Table 2 of the guidelines.

Where asbestos is identified the standard waste classification with regard to chemical impact is overridden by the presence of asbestos, which triggers the material to be classified as Special Waste – Asbestos Waste. The secondary (chemical) waste classification is still required to ensure the receiving facility can accept the waste under the provisions of their environmental protection licence. A summary of the classification criteria is provided below:

Table 13: Waste Classification Criteria

Classification	SCC value	TCLP value
General solid waste	≤ SCC1	≤ TCLP1
Restricted solid waste	≤ SCC2	≤ TCLP2
Hazardous waste	> SCC2	> TCLP2
Special Waste – Asbestos Waste	Positive Detection for Asbestos	

7.0 DATA QUALITY OBJECTIVES

Data Quality Objectives (DQO) are required to define the quality and quantity of data needed to support management decisions. The process for establishing DQO's is documented by Australian Standard: AS 4482.1-2005 and referenced by the National Environment Protection (Assessment of Site Contamination) Measure (NEPC;2013). The DQO's for the Detailed Site Investigation sampling program were developed with the following procedure:

7.1 STEP 1: STATE THE PROBLEM

The Site is proposed to be re-developed for residential land use. The outcomes of the Site reviews as documented in dot point 1 of **Section 1.3**, and the PSI (CS;2021) identified thirty six (36) pAECs. The pAECs are required to be investigated to assess if the Site is suitable or can be made suitable for the proposed land use to meet the requirements of SEPP55.

The potential Areas of Environmental Concern (AECs) at the Site required to be investigated were:

- **pAEC01 – pAEC12**: Stockpiling of material (various);
- **pAEC13 – pAEC25**: Areas of potential uncontrolled fill (various);
- **pAEC26**: Septic system;
- **pAEC27**: Dam water;
- **pAEC28**: Livestock holding pen;
- **pAEC29 –** AEC31: Historical building footprints (various);
- **pAEC33**: Asphalt / gravel roadway;
- **pAEC34**: Gravel ring road;
- **pAEC35**: Historical uncontrolled filling in creek; and
- **pAEC36**: Non-putrescible waste stockpiles.

7.2 STEP 2: IDENTIFY THE DECISION/GOAL OF THE STUDY

The primary goals / objectives of the investigation program were to:

- Through on-site investigations, characterise the type, extent, and level of contamination at the Site, if any.

- Provide a statement regarding the suitability of the Site for the proposed future land-use in accordance with SEPP55.
- Provide recommendations for further investigations, remediation or site management, as required.

7.3 STEP 3: IDENTIFY THE INFORMATION INPUTS

The sample results for the Potential Contaminants of Concern (PCoC) shall be used to inform decisions regarding the Site suitability for the proposed land use, and the requirement for any further investigation, remediation or site management works, as necessary. In addition, the following inputs are required:

- Representative samples of potentially affected media including soil, fill and building materials;
- Measurements of environmental parameters in the affected media for PCoC identified in the CSM;
- Comparison of the parameter results against the adopted Site Assessment Criteria (SAC);
- Record of sampling methods, observations and field screening results and ground investigation logs; and
- The completion of a ***Detailed Site Investigation (DSI)*** report in general accordance with the NSW EPA (2020) guidelines for consultants reporting on contaminated land to support an assessment of the Site suitability.

7.4 STEP 4: DEFINE THE STUDY BOUNDARIES

The investigation was limited to the scope of work outlined in the project proposal and the accessible areas at the time of the Site works within the proposed development area of ***48 Campbell Street, Gerringong***, as delineated within **Figure 5**.

7.5 STEP 5: DEVELOP THE ANALYTICAL APPROACH

The site information and results obtained from this assessment scope will be compared against the adopted SAC in **Section 6.0** for the proposed land use. The decision rule process is defined by the following:

- Field QA/QC indicate the results are reliable;
- Laboratory QA/QC indicate the results are reliable;
- Laboratory Practical Quantitation Limits (PQL) or Limits of Reporting (LOR) are less than the SAC; and
- Results meet the adopted SAC and/or are within background levels and regulatory criteria.

7.6 STEP 6: SPECIFY PERFORMANCE OR ACCEPTANCE CRITERIA

To ensure the quality of the environmental data collected during the remediation and validation program, detailed quality assurance and quality control (QA/QC) measures will be applied. The

QA/QC measures will be followed from the inception of the project, during intrusive fieldworks, laboratory analysis of samples and data reporting. The QAQC measures to be adopted are documented in detail below within **Section 9.0**.

7.7 STEP 7: DEVELOP THE PLAN FOR OBTAINING DATA

The seventh and final step involves identifying the most effective sampling and analysis design for generating the data that is required to satisfy the data quality objectives. The proposed investigation sampling program is based on and accounts for the following key points:

- The CoPCs as documented in the Conceptual Site Model documented in **Section 5.0**;
- The source of the CoPCs;
- Sample quantity and density in accordance with industry standards and EPA guidelines;
- The results will be compared to Tier 1 screening criteria for the proposed land use – NEPM 'A' residential land use.

Indicators (DQI) used to identify that data obtained during the DSI scope or works has been done so in a way which meets project data quality objectives (DQO) are summarised in **Table 14** below.

Table 14: Data Quality Objectives

DQO	Evaluation Criteria
Documentation completeness	Completion of field records, chain of custody documentation, laboratory test certificates from NATA-accredited laboratories.
Data comparability	Use of appropriate techniques for the sampling, storage and transportation of samples. Use of NATA accredited laboratory using NEPM endorsed procedures.
Data representativeness	Adequate sampling coverage of all Areas of Environmental Concern (AECs) at the Site, and selection of representative samples.
Precision and accuracy for sampling and analysis	Use properly trained and qualified field personnel and achieve laboratory QC criteria. Blind field duplicates to be collected at a minimum rate of 1 in 10 samples. RPD's to be less than 30% for inorganic and 50% for organic analyses. Rinsate samples not considered necessary as all CoPC measured by the lab was assumed to be contamination present at the site. Disposable single use items used for the collection of samples.

8.0 SAMPLING AND ANALYSIS PLAN

8.1 SOIL SAMPLING METHODOLOGY

8.1.1 Soil Sample Locations

Soil sample locations were selected with consideration of the ASC NEPM (2013) Schedule B2 Section 6, guidelines on Sampling Design (NEPC;2013).

Based on the Site area of ***~140,000m² or 14 Hectares*** the relevant sample density guidelines provided in Table E1 AS4482.1(2005) require a minimum of **one-hundred-sixty (160)** grid-based sample locations to provide a 95% confidence of detecting of circular hotspots which is not considered practical for the purpose of this assessment.

Based on the results of the Stage 1 PSI and knowledge of the probable distribution of contaminants at the Site, with known or suspected areas of contamination, judgmental sampling was adopted as the most appropriate sampling design methodology.

A total of ninety (90) soil sampling points and ***four (4) surface water sampling points*** were installed during the investigation program. Where asbestos was encountered, additional test pits were installed to further delineate the CoPC in general accordance with the the WA 2021 asbestos guidelines which states that densities within NSW EPA (1995) guidelines are increased by a coefficient of between 0.5-2.0.

Sampling locations were limited to Areas of Environmental Concern (AECs) and accessible areas at the time of this investigation based on Site infrastructure, hardstand (if any) and services. Final sample locations were selected based on ground conditions overserved during investigation. Sample locations are depicted in **Figure 7**, **Figure 8** and **Figure 9**. Consideration was also given to:

- Targeted AECs;
- Potential Fill, current and former building areas;
- Down-gradient and up-gradient boundaries;
- Accessible ground and safe standing conditions for test pit excavations; and
- Safe working distance from services and utilities.

Sample locations were recorded in the field using a handheld GPS. GPS coordinates are provided within test pit logs provided **Appendix D**.

Areas not investigated or accessible at the time of inspections, if any, are summarised within ***Section 12.9***.

8.1.2 Test Pits & Boreholes

Test pit and borehole investigations were undertaken with a mechanical excavator and advanced until the target depth was achieved or natural ground encountered. The investigation methods were considered adequate to identify potential hotspots or AECs and characterise ground. Sample locations are provided in **Figure 7** attached.

8.1.3 Stockpile Sampling

Stockpile sample densities were selected with consideration of both the Sampling Design (NEPC;2013) and NSW EPA Waste Classification Guidelines (2016). In general, a discrete soil sample was collected for every 25 m^3 of stockpiled material.

8.1.4 Soil Sample Method

Samples were collected in general accordance with the principals described in AS4482.1- 2005: Guide to sampling and investigation of potentially contaminated soil (Part 1: Non-volatile and

semi-volatile compounds) and AS4482.2-1999: Guide to sampling and investigation of potentially contaminated soil (Part 2: Volatile compounds).

Soil logging procedures followed a systematic and standardised format providing a classification of the soil group based on particle size and structure. Field observations were conducted to detect potential soil contamination, if any, and to distinguish between soil composition, condition and structure.

8.1.5 Asbestos in Soil

Investigations of asbestos materials were conducted by *SafeWork NSW* Licenced Asbestos Assessor Christopher Allen (LAA001457).

Asbestos samples were collected in general accordance with NEPM (2013) Schedule B2, Section 11, Assessment of asbestos in soil contamination. Asbestos soil samples were collected within areas and/ or test pits observed to contain or present a risk of asbestos, or where asbestos had been identified as a CoPC within the Preliminary Site Investigation. Samples collected as follows:

- **Asbestos fines sampling**: Sample location where asbestos was observed or presumed high risk, 10 litres of material screened through a 7 mm sieve and the coarse non passing material spread out for inspection on an impermeable layer of contrasting colour material (black plastic). Any identified ACM removed, double bagged and labelled for weighing. One wetted 500 ml sub sample collected from the fines passing the 7 mm sieve and submitted for laboratory analysis for asbestos identification (AS4964-2004); Where asbestos is detected in any sample, the concentration of asbestos as fragments (ACM) and as loose fibres (FA or AF) is compared with the Health Screening Levels (HSLs).
- **Asbestos identification**: Where potential asbestos materials were encountered, a representative material fragment was collected and double bagged. Materials were submitted to a NATA accredited laboratory for either a positive or negative identification for asbestos; and
- **Collection of asbestos materials**: Asbestos cement sheet fragments were collected from each test pit where materials were identified. For each excavator bucket, impacted fill or soil profiles were manually screened and raked. Manual screening was conducted until clean or natural material were encountered. Fragments of asbestos were collected and weighed. Test pit dimensions of the impacted profile/s were measured. Concentrations of asbestos fragments in soil were then calculated and the compared against the relevant NEPM (2013) HSL for bonded asbestos materials in soil.

8.1.6 Soil Sampling Depths

Sample depths were selected with consideration of ground conditions observed during investigations. Samples were obtained near the surface and at 0.5 m intervals, changes in lithology, base of hole, or as recorded in the test pit logs. Additional samples are collected at 1.0 m intervals or as defined by changes in ground conditions triggered by Site observations. Generally, test pits were advanced until the target depth was achieved, or natural ground was encountered. This was considered sufficient to assess ground conditions at the Site. A

maximum investigation depth of ***1.1 metres*** was reached with termination in clay assessed to be natural ground.

8.1.7 Sample Preservation

All samples were collected in general accordance with industry standard QA/QC procedures. Discrete soil samples were collected with disposable sterile gloves changed between samples, placed directly into laboratory cleaned 250 mL jars and immediately stored on ice. Sample containers were individually labelled with sample identification clearly marked on the container and sealed lid.

8.1.8 Photoionisation Detector (PID) Vapour Analysis

A photoionisation detector (PID) was used to measure selected volatile gases of selected soil samples in accordance with Section 7.4.3 of Schedule B2 of the National Environment Protection Measure (NEPC, 1999). All collected samples were analysed with the PID, or as specified in the soil logs provided in **Appendix D**. Equipment used; MultiRAE PID Lite Serial Number M01C010297. Copies of calibration records provided in **Appendix G**.

8.1.9 Selection of Samples for Analysis

Samples were selected for analysis based on the stratigraphic conditions to identify any apparent contamination and define soil conditions vertically and laterally. Not all samples collected were analysed. Selected samples were analysed for the suite of analytes as outlined in **Table 7**.

Where applicable, if elevated concentrations were reported in a sample, additional samples from adjoining or underlying locations analysed to further determine the extent of contamination. All other samples not selected for analysis were placed on hold in a refrigerated environment for subsequent analysis, if required.

The sample program was considered adequate to identify and characterise any potential contamination at the Site.

Samples were generally analysed for the full suite of CoPC provided within **Table 7**. A reduced analysis regime for OCPs, OPPs and PCBs was considered appropriate for this assessment. NATA accredited laboratory results for OCPs, OPPs and PCBs as part of this assessment were all reported below the detectable limit. Hence, the analysis regime for OCPs, OPPs and PCBs was considered adequate and did not trigger the requirement for additional sample analysis.

Analysis for asbestos fines in soil were selected based on the visual identification of potential ACM with test pits, or for samples where asbestos was identified as a CoPC within the PSI. This was appropriate as asbestos as a COPC was considered to be limited to areas where it was visible, specifically areas of Fill or disturbance, and not within wider site conditions.

A summary of the sample analysis program is provided within the COC documentation provided in **Appendix A** and **Appendix B**. The sample program was considered adequate to address the AECs identified within the PSI, and to further identify and characterise potential contamination at the Site.

8.2 GROUNDWATER SAMPLING AND ASSESSMENT

Groundwater was not encountered during this assessment. The PSI (CS;2021) did not identify groundwater sampling as a requirement to assess pAECs and documented that groundwater (if any) within areas of the Site scheduled for development works, i.e. areas of the Site outside the flood zone, is expected to be at sufficient depths where it will not be intersected. Groundwater depths within surrounding bores was reported between depths of 2.4 mbgl and 54 mbgl.

Furthermore, soil contamination within the Site was limited to shallow surface soils, generally less than 1.0 mbgl. As no potentially mobile soil contamination was identified within the Site soils, no groundwater monitoring Wells were installed during the scope and no further assessment of groundwater at the Site was considered necessary.

9.0 QUALITY ASSURANCE & QUALITY CONTROL

9.1 SAMPLING QUALITY CONTROL

Samples collected in accordance with the principles described in AS4482.1-2005: Guide to sampling and investigation of potentially contaminated soil (Part 1: Non-volatile and semi-volatile compounds) and AS4482.2-1999: Guide to sampling and investigation of potentially contaminated soil (Part 2: Volatile compounds).

9.2 SAMPLING EQUIPMENT DECONTAMINATION

Re-usable sampling equipment such as augers and hand tools decontaminated between samples by washing with phosphate free detergent (Decon 90) followed by a rinse with potable water. Re-use of sampling equipment was avoided, where possible. Single use deposable sampling equipment was the preferred method. Asbestos in soil screening sampling equipment is decontaminated by wiping down with a cloth rag wet with detergent solution prior to being dried with a separate cloth rag. Both rags to be placed in asbestos waste bags and disposed of in accordance with SafeWork NSW Code of Practice at a suitable licenced waste facility.

9.3 FIELD QUALITY ASSURANCE & QUALITY CONTROL

The Quality Assurance and Quality Control (QA/QC) protocols used during the fieldwork are summarised in **Table 15**. Refer to **Appendix A** (Soil) for sample Chain of Custody (COC) documentation. A summary of Relative Percent Differences (RPD) between primary samples, blind field duplicates and interlaboratory duplicates is provided in **Table 22**.

Table 15: Field QA/QC

Protocol	Description
Sampling Team	Site personnel comprised only experienced and qualified environmental professionals trained in conducting site contamination investigations.
Sample Method	Samples obtained in laboratory prepared bottles with preservatives appropriate for the required analysis.

Protocol	Description
Sample Equipment	All sample equipment disposed or decontaminated between sample sites.
Field Screening	Visual and manual inspection of sample materials for potential contamination recorded on field sheets.
Chain of Custody Forms	All samples logged and transferred under appropriately completed Chain of Custody (COC) forms with Sample Receipts issued by the laboratory.
Blind Field Duplicate	At least one (1) blind field duplicate collected per 20 samples and submitted for analysis accompanied by COC forms. Duplicates were analysed for TRH, BTEX, PAHs and 8HM and included samples A10/DUP1-0.2, A18/DUP2-0.2, A23/DUP3-0.2, A32/DUP4-0.2, A32/DUP5-0.2 and A35/DUP6-0.2.
Intra Laboratory duplicate/triplicate	At least 1 per 20 samples. Samples analysed for TRH, BTEX, PAHs and 8HM. Triplicates were analysed for TRH, BTEX, PAHs and 8HM and included samples Triplicate 1, Triplicate 2, Triplicate 3, Triplicate 4, Triplicate 5, and Triplicate 6.

9.4 LABORATORY ANALYTICAL METHODS

Analysis of samples was conducted by NATA accredited laboratories:

- Primary soil samples analysed by Australian Laboratory Services (ALS),
- Asbestos analysis by *ASET*
- Interlaboratory analysis by *EnviroLab*.

Laboratory Sample receipt Number (SRN), and QA/QC results are detailed in the Laboratory reports contained in **Appendix G**.

9.5 DATA EVALUATION

A summary of the Data Quality performance and evaluation is provided in **Table 16**.

Table 16 Data Quality Objectives and Criteria

Objective	Performance	Status
Documentation completeness	• Completion of field records; • chain of custody (COC) documentation; • equipment calibration certificates; • NATA Laboratory Sample Receipt Notification (SRN); and • NATA laboratory Certificate of Analysis (COA). • Sample Location Plans. • Test pit and borehole logs.	✓

Objective	Performance	Status
Precision & accuracy for sampling & analysis	• Use only trained and qualified field personnel; • Calibration certificates for field equipment; • Appropriate sampling and field techniques; • Decontamination procedures; • Achieve laboratory QC criteria (as specified in the laboratory supplied QC reports; and • Achieve QAQC requirements for RPDs and Recovery	✓
Identify Anomalies	• No elevated results not expected by the CSM; • No labelling or sample management errors; • No laboratory analyses or reporting errors	✓
DATA completeness	• Sampling density comparison meets NSW EPA (1995) 'Sampling Design Guidelines' for or all potential contaminants of concern at all areas of environmental concern; and • Systematic and judgemental sampling to provide sufficient data representative of all AECs.	✓
Data comparability	• Use of appropriate techniques for the sampling, storage and transportation of sample media; • Use of NATA certified laboratory using NEPM endorsed procedures; and • Comparison with previous site information, if any.	✓
Data representativeness	• Adequate sampling coverage of Site area, AEC's, down gradient and upgradient boundaries; • Selection of representative samples from each sampling location; and • Analysis for CoPC. • Achieve laboratory QC criteria. • Achieve QAQC requirements for RPDs and Recovery.	✓

All laboratories were NATA accredited and the Practical Quantitation Limits (PQL) also referred to as Limits of Reporting (LOR) were within the acceptable levels for the investigation criteria. Laboratory certificates of analysis (COA) provided in **Appendix A** indicated that for the samples collected during the scope of works, sampling techniques, transport procedures and laboratory analysis were satisfactory. Internal laboratory Quality Control (QC) and QA/QC Compliance Assessments are provided in **Appendix G**. QA/QC documentation provided by each laboratory (where applicable) generally reported that satisfactory results.

Analysis of Relative Percent Differences (RPD) of blind duplicates and interlaboratory triplicate samples was undertaken as part of this assessment. Results were generally reported within the acceptance criteria documented in Table 4 of AS4482.1-2005, the RPD for inorganics was set at <30% and for organics set at <50%.

RPD Results are summarised in **Table 22 - Table 27**. Variations outside the accepted RPD criteria were generally limited for heavy metals in all QA/QC samples. QA/QC samples were generally collected within areas of Fill. The variations in RPD results highlight the uncontrolled and/or heterogenous nature of the fill at the Site.

In summary, the QA/QC indicators either all complied with the required standards or showed variations that would have no significant effect on the quality of the data or the conclusions of this

assessment. It is therefore concluded that, for the purposes of this study, the QA/QC results are valid, and the quality of the ***data is acceptable for use in this assessment***.

10.0 INVESTIGATION RESULTS

The following sections present the results of the DSI program incorporating Site works and sampling between the 19/11/2021 and 18/01/2022.

10.1 STRATIGRAPHIC CONDITIONS

Test-pit investigations generally encountered two (2) general soil profiles:

1. Where undisturbed ground was intersected, test pits encountered grass cover, underlain by silty soils and red-brown sandy clays beyond 0.5mbgl.
2. Test pits within building footprints and areas disturbed during historical uncontrolled filling typically encountered silty sands and/or gravels with a variety of foreign materials including building/demolition waste and asbestos containing materials. While areas of uncontrolled fill were generally contained to shallow surface soils less than 0.5mbgl, some areas of deeper fill were encountered to depths of 1.0mbgl.

No groundwater was encountered during site works. Test pit logs are provided in **Appendix D**.

10.2 SOIL RESULTS

Laboratory Certificates of Analysis (COA) for soil results are contained in **Appendix A**. Upon receipt the results were tabulated and compared against the adopted SAC to identify any exceedance or AECs. A summary of soil results is provided in **Table 19**.

Asbestos Certificates of Analysis (COA) are provided in **Appendix B** with a summary of results provided in **Table 20**.

10.2.1 Benzene Toluene Ethylbenzene Xylene (BTEX)

BTEX compounds are volatile compounds commonly found in petroleum products and are typically found together at contaminated sites.

Results for BTEX were reported at concentrations below the laboratory Limit of Reporting (LOR) and the adopted Site Assessment Criteria (SAC). Hence, the results are considered satisfactory.

10.2.2 Total Recoverable Hydrocarbons (TRH)

Laboratory testing was conducted for light fraction (C6-10) and heavy fraction (C10-40) Total Recoverable Hydrocarbons (TRH). Light fractions are generally associated with petrol whilst middle to heavy fractions are an indication of diesel or kerosene.

Results for light fraction hydrocarbons were reported below the laboratory Limit of Reporting (LOR) or the adopted Site Assessment Criteria. Hence, the results are considered satisfactory. Detections of heavy fraction hydrocarbons were reported in multiple locations across the Site, however results were primarily reported below the SAC. Two (2) exceedances of the adopted SAC were reported in the following sample locations:

- A28/TP5-0.3: C16-C34 (440mg/kg > EIL/ESL for coarse soil 300mg/kg); and
- A36/SP1-1: C16-C34 (370mg/kg > EIL/SL for coarse soil 300mg/kg).

10.2.3 Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are formed by the incomplete combustion of coal, oil, petrol, wood, or other organic materials. Major sources of PAHs include asphalt roads, road tar, coal, coal tar, and fires of all types.

Results for PAHs were reported below the laboratory LOR and/or the adopted SAC. Hence, the results are considered satisfactory.

10.2.4 Heavy Metals and Metalloids

Screening was conducted for eight (8) selected heavy metals and metalloids. Concentrations of arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc were generally reported at concentrations below the SAC. Exceedances of the adopted SAC were reporting for select heavy metals in the following sample locations:

- A15/TP1-0.2: Lead (404mg/kg > HIL 'A' 300mg/kg);
- A15/TP4-0.2: Lead (463mg/kg > HIL 'A' 300mg/kg);
- A17/TP3-0.3: Lead (630mg/kg > HIL 'A' 300 mg/kg);
- A35/TP3-0.2: Lead (425mg/kg > HIL 'A' 300mg/kg); and
- A35/TP3-0.2: Zinc (13,700mg/kg > HIL 'A' 7,400mg/kg).

10.2.5 Organochlorine Pesticides (OCPs)

OCPs are characteristically very stable. Since they were first introduced into Australia in the mid-1940s, OCPs have been used in many commercial products. Commonly used OCPs were DDT, lindane, chlordane, dieldrin, aldrin and heptachlor.

Results for OCPs were reported at concentrations below the LOR or SAC. Hence, the results are considered satisfactory.

10.2.6 Organophosphate Pesticides (OPPs)

OPPs are synthetic, more water soluble and have higher degradation rates than OCPs. OPPs may interfere with the nervous system and cause development or reproductive harm, as well as endocrine disruption.

Results for OPPS were reported at concentrations below the LOR or SAC. Hence, the results are considered satisfactory.

10.2.7 Microbiology

Laboratory testing was conducted for E. Coli, Faecal Coliforms and Salmonella. Pathogenic soil microbiology are generally associated with the application of manure products to land, or areas of farmland, such as dairy farms, feed lots or holding pens, where accumulations of manure can occur.

Results for Salmonella reported results as 'not detected' within all samples. Laboratory results for E. Coli and Faecal Coliforms generally reported elevated concentrations, with five (5) of eight (8) sample locations reporting exceedances of the adopted SAC, as summarised below:

- A19/TP4-0.1: E. Coli (>35,000mg/kg > NSW EPA Biosolids 100mg/kg);
- A19/TP4-0.1: Faecal Coliforms (>35,000 > NSW EPA Biosolids 1,000mg/kg)
- A28/TP1-0.1: E. Coli (>29,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A28/TP1-0.1: Faecal Coliforms (>29,000mg/kg > NSW EPA Biosolids 1,000mg/kg)
- A28/TP5-0,1: E. Coli (>48,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A28/TP5-0,1: Faecal Coliforms (>48,000mg/kg > NSW EPA Biosolids 1,000mg/kg)
- A29/TP1-0.1: E. Coli (>42,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A29/TP1-0.1: Faecal Coliforms (>42,000mg/kg > NSW EPA Biosolids 1,000mg/kg)
- A29/TP2-0.1: E. Coli (7,800mg/kg > NSW EPA Biosolids 100mg/kg)
- A29/TP2-0.1: Faecal Coliforms (7,800mg/kg > NSW EPA Biosolids 1,000mg/kg)

10.2.8 Nutrients

Nutrients are essential for healthy soils and plant growth, however excessive build up or 'loading' of nutrients can be harmful to adjacent aquatic ecosystems. Runoff from soils with high levels of nutrients can cause algal blooms and subsequent declines in dissolved oxygen levels.

Concentrations of Ammonia, Nitrate, Nitrite, Sulfate and Chloride were all reported at concentrations below the adopted SAC. Hence, the results are satisfactory.

10.2.9 Asbestos in Soil

During Site works, fragments of asbestos containing materials (ACM) were identified across multiple areas of the Site, both on the ground surface, and within shallow surface soils. The impacted areas are delineated within **Figure 7** attached. Asbestos in Soil (ASBINS) results are further summarised below.

10.2.9.1 Non-Friable (Bonded) Asbestos Materials

Bonded ACM was identified within or adjacent to test pits within the following AECs; AEC5, AEC13, AEC14, AEC15, AEC17, AEC18, AEC19, AEC20, AEC21, AEC22, AEC24, AEC28, AEC29, AEC31, AEC34 and AEC35. While fragments of bonded ACM were generally limited to shallow surface soils less than 0.2mbgl, some areas of asbestos impacted fill were identified to a maximum excavation depth of 0.9mbgl.

Laboratory asbestos identification reported a mixture of positive detections for Chrysotile, Amosite and Crocidolite asbestos within fragments.

Calculations to determine bonded asbestos concentrations in soil as a weight for weight percentage concluded that bonded asbestos was below the HIL 'A' guideline of <0.01%. Calculations are presented in **Table 20**. However, the presence of bonded asbestos materials was considered an exceedance of the aesthetic criteria for residential land use. Therefore, the presence of bonded asbestos in soil is not considered suitable for the proposed development.

10.2.9.2 Friable Asbestos Materials

Analysis for friable asbestos containing materials, comprising asbestos fines (AF) and friable asbestos (FA), was conducted for samples within AECs where asbestos had previously been identified as a CoPC.

Results for NEPM screening of asbestos in soil samples reported asbestos fines (AF) in soils in one (1) sample location:

- A34/TP3-0.2: Asbestos Fines (0.001% > 0.001% HSL 'A').

The presence of friable asbestos is not considered suitable for the proposed development.

10.3 SURFACE WATER RESULTS

Laboratory Certificates of Analysis (COA) for surface water results are contained in **Appendix C**. Upon receipt the results were tabulated and compared against the adopted SAC to identify any exceedance or AECs. A summary of soil results is provided in **Table 19.**

10.3.1 Benzene Toluene Ethylbenzene Xylene (BTEX)

BTEX compounds are volatile compounds commonly found in petroleum products and are a common indication of ground contamination.

Results for BTEX were reported at concentrations below the laboratory Limit of Reporting (LOR) and the adopted Site Assessment Criteria (SAC). Hence, the results are considered satisfactory.

10.3.2 Total Recoverable Hydrocarbons (TRH)

Laboratory testing was conducted for light fraction (C6-10) and heavy fraction (C10-40) Total Recoverable Hydrocarbons (TRH). Light fractions are generally associated with petrol whilst middle to heavy fractions are an indication of diesel or kerosene.

Results for light fraction and heavy fraction hydrocarbons were reported below the laboratory Limit of Reporting (LOR) or the adopted Site Assessment Criteria. Hence, the results are considered satisfactory.

10.3.3 Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are formed by the incomplete combustion of coal, oil, petrol, wood or other organic materials. Major sources of PAHs include asphalt roads, road tar, coal and fires of all types.

Results for PAHs were reported below the laboratory LOR and/or the adopted SAC. Hence, the results are considered satisfactory.

10.3.4 Heavy Metals and Metalloids

Screening was conducted for eight (8) selected heavy metals and metalloids. Concentrations of arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc were generally reported at concentrations below the SAC. Exceedances of the adopted Hardness Modified Trigger Values (HMTV) SAC were reporting for select heavy metals in the following sample locations:

- A35/SW01: Cadmium (6.7µg/L > HMTV 0.29 µg/L);
- A35/SW01: Chromium (3µg/L > HMTV 1.39);

- A35/SW01: Copper (30 µg/L > HMTV 1.98 µg/L);
- A35/SW01: Lead (18 µg/L > HMTV 15.52 µg/L);
- A35/SW01: Zinc (1940 µg/L > HMTV 11.29 µg/L);
- A35/SW NTH: Chromium (3 µg/L > HMTV 1.39µg/L);
- A35/SW NTH: Copper (19 µg/L > HMTV 1.98 µg/L); and
- A35/SW NTH: Zinc (42 µg/L > HMTV 11.29 µg/L).

ENRS note that no exceedance of adopted SAC were reported in the downstream sample location A35/SW STH, which is satisfactory as the results are inferred to be associated with a localised soil hotspot which is capable of being remediated by excavation and offsite disposal with no reported downstream impacts.

10.3.5 Nutrients

Surface water samples were analysed for select nutrients including Ammonia, Nitrate, Phosphorus and Sulphate. The most bio-available forms of nitrogen are Ammonium (NH4+) and Nitrate (NO3-). Ammonia is an oxygen-consuming compound and is toxic to aquatic biota at elevated concentrations. Ammonia toxicity increases under low oxygen levels and higher pH.

Results for nutrients were reported below the laboratory LOR and/or the adopted SAC. Hence, the results are considered satisfactory.

10.3.6 pH

pH is a measure of hydrogen activity. pH determines the balance between positive hydrogen ions (H+) and negative hydroxyl ions (OH-) and provides a test of water acidity (low pH) or alkalinity (high pH). Most natural freshwaters have a pH in the range of 6.5 – 8.0. Changes in pH may affect the physiological functioning of biota and affect the toxicity of contaminants, such as low pH increasing the mobility of heavy metals and high pH generating ammonia.

Results for pH were relatively neutral and reported in the range specified within the adopted SAC. Hence, the results are satisfactory.

10.3.7 Salinity

Salinity is reported by the laboratory as Electrical Conductivity (EC). Table 3.3.3 of the ANZECC (2000) guidelines document default trigger values for EC in lowland rivers between 125 µS/cm and 1,200 µS/cm, with a TV for the protection of 95% of freshwater species of 2,200 µS/cm.

Result for salinity were reported below the adopted SAC. Hence, the results are satisfactory.

11.0 ENVIRONMENTAL SITE ASSESSMENT

As presented in **Table 17** below, several exceedances of the adopted SAC were reported for heavy fraction hydrocarbons, heavy metals, asbestos, and pathogens within multiple AECs across the Site. While exceedances of the SAC varied in their nature and location within the Site, the impacted areas were not considered to be representative of the broader Site conditions and were instead defined within localised sub-areas which may be considered suitable for remediation and validation. The AECs which reported exceedances of the SAC are presented in **Figure 10** attached.

Based on the available data reviewed in this assessment **the Site is assessed as capable of being made suitable for the proposed development in accordance with *NSW State Environmental Planning Policy No. 55 (SEPP55) supported by the completion of remediation and validation works*** *as per the Remediation Action Plan (RAP) prior to the lodgement of a subdivision application.*

Table 17: Environmental Site Assessment (Summary)

Preliminary AEC	Source & Affected Media	Results (Soil Chemistry)	Results (Asbestos in Soil)	Suitability	Action
AEC01 Soil Stockpile	Stockpiling of soil	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC02 Organic Stockpile	Stockpiling of organic matter	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC03 Organic Stockpile	Stockpiling of organic matter	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC04 Organic Stockpile	Stockpiling of soil	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC05 Building Waste Stockpile	Stockpiling of building waste	N/A	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC06 Sand Stockpile	Stockpiling of sand	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC07 Soil Stockpile	Stockpiling of soil	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC08 Soil Stockpile	Stockpiling of soil	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC09 Garden Bed	Stockpiling of soil for garden use	< SAC	< SAC	✓	Remove AEC from the revised CSM

Preliminary AEC	Source & Affected Media	Results (Soil Chemistry)	Results (Asbestos in Soil)	Suitability	Action
AEC10 Garden Bed	Stockpiling of soil for garden use	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC11 Garden Bed	Stockpiling of soil for garden use	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC12 Soil Stockpile	Stockpiling of soil	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC13 Fill Area 1	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC14 Fill Area 2	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC15 Fill Area 3	Historical uncontrolled filling	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC16 Fill Area 4	Historical uncontrolled filling	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC17 Fill Area 5	Historical uncontrolled filling	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC18 Fill Area 6	Historical uncontrolled filling, plant laydown.	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.

Preliminary AEC	Source & Affected Media	Results (Soil Chemistry)	Results (Asbestos in Soil)	Suitability	Action
AEC19 Fill Area 7	Historical placement of material, storage and handling of lice and tick treatments, use of hazardous building materials, livestock effluent and termite treatment.	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC20 Fill Area 8	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC21 Fill Area 9	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC22 Fill Area 10	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC23 Fill Area 11	Historical uncontrolled filling	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC24 Fill Area 12	Historical uncontrolled filling	< SAC	> SAC	Pending RAP	Include in revised CSM and prepare RAP.
AEC25 Fill Area 13	Historical uncontrolled filling	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC26 Septic System	Handling and storage of domestic waste effluent	N/A	N/A	✓	Manage during development

Preliminary AEC	Source & Affected Media	Results (Soil Chemistry)	Results (Asbestos in Soil)	Suitability	Action
AEC27 Dam Water	Handling and storage of surface water	< SAC	N/A	✓	Remove AEC from the revised CSM
AEC28 Livestock Holding Pen	Storage and handling of lice and tick treatments, livestock effluent.	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC29 Historical Building Footprint	Uncontrolled demolition	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC30 Historical Building Footprint	Uncontrolled demolition	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC31 Historical Building Footprint	Uncontrolled demolition	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC32 Historical Farming Area	Use of chemicals in farming area	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC33 Asphalt / Gravel Roadway	Historical uncontrolled filling	< SAC	< SAC	✓	Remove AEC from the revised CSM
AEC34 Gravel Ring-Road	Historical uncontrolled filling	< SAC	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC35 Creek Filling	Historical uncontrolled filling	**> SAC**	**> SAC**	Pending RAP	Include in revised CSM and prepare RAP.
AEC36 Waste Stockpile	Stockpiling of waste	**> SAC**	< SAC	Pending RAP	Include in revised CSM and prepare RAP.

12.0 CONCEPTUAL SITE MODEL (REFINED)

Based on the available data and results of the DSI program, a Refined Conceptual Site Model (Refined CSM) is presented in **Table 18** and **Sections 12.1 – 12.7** below. The reader is advised that the numbering of the Refined AEC's below replaces any previous preliminary AECs. A revised CSM is provided in **Figure 11**.

12.1 AEC-R01

AEC-R01 comprised preliminary AECs; AEC13, AEC22 and AEC24. The revised AEC covers an area of approximately 1,000m^2 on the southern side of the Site's northern residential dwelling. At the time of the DSI scope of works, AEC-R01 was characterised by isolated fragments of asbestos cement (AC) sheeting within shallow surface soils (less than 0.2mbgl).

NATA accredited laboratory analysis of soil samples for previously identified CoPC reported concentrations below the adopted NEPM (2013) 'HIL A' investigation levels for residential sites. The presence of asbestos containing materials within AEC-R01, while low and isolated, was considered an exceedance of the aesthetic criteria for residential land use.

AEC-R01, as identified in **Figure 10**, requires remediation works prior to Site development.

12.2 AEC-R02

AEC-R02 comprised preliminary AEC36. AEC-R02 is located south-west of the Sites northern residential dwelling, and at the time of the DSI scope of works was characterised by one (1) stockpile of soil, vegetation, and non-putrescible waste approximately 40m^3 in size.

NATA accredited laboratory analysis of soil samples for previously identified CoPC generally reported concentrations below the adopted NEPM (2013) 'HIL A' investigation levels for residential sites. One (1) exceedance of EIL/ESL thresholds for urban residential and public space was reported for heavy fraction (C16-C34) hydrocarbons (440mg/kg > EIL/ESL 300mg/kg). The presence of large volumes of non-putrescible waste was also considered an exceedance of the aesthetic criteria for residential land use. No asbestos containing materials were identified within the stockpiled material.

AEC-R02, as identified in **Figure 10**, requires remediation works prior to Site development.

12.3 AEC-R03

AEC-R03 (formerly AEC17) comprised an area of uncontrolled fill in the centre of the Site. At the time of the DSI scope of works, AEC-R03 was characterised by an area of primarily reworked natural ground, approximately 400m^2 in size. One (1) area of uncontrolled fill, presumed to be an isolated area within the broader AEC boundary, was encountered during test pit investigations. The uncontrolled fill comprised dark silty sand with gravel, tiles and glass. One (1) stockpile of unknown origin was also located on the surface of AEC-R03, and was observed to contain some foreign materials including building waste.

NATA accredited laboratory analysis of soil samples for previously identified CoPC generally reported concentrations below the adopted NEPM (2013) 'HIL' A investigation levels for residential Sites. One (1) exceedance of the adopted SAC was reported in sample A17/TP3-0.3 for lead (630mg/kg > HIL 'A' 300mg/kg). One (1) isolated fragment of asbestos containing compressed cement was also located on the ground surface adjacent to test pit A17/TP1. No asbestos containing materials were observed within excavated material or within test pit walls from AEC-R03.

AEC-R03, as identified in **Figure 10**, requires remediation works prior to Site development.

12.4 AEC-R04

AEC-R04 (formerly AEC33) comprised an access ring-road within the central eastern portion of the Site. At the time of the DSI scope of works, AEC-R04 was characterised by approximately 500m^2 of processed aggregate roadway which varied in depth between 0.2mbgl and 0.5mbgl. Multiple fragments of asbestos cement sheeting, observed to be in very poor condition, were observed within the processed aggregate.

NATA accredited laboratory analysis of soil samples for previously identified chemical CoPC reported concentrations below the adopted NEPM (2013) HIL 'A' investigation levels for residential Sites. Of the four (4) sample locations within AEC-R04, one (1) exceedance of the adopted SAC was reported for friable asbestos in A34/TP3 (0.001% = 0.001% HSL 'A').

AEC-R04, as identified in **Figure 10**, requires remediation works prior to Site development. Given the detection of friable asbestos within AEC-R04, ENRS also recommend the area is made safe in general accordance with the SafeWork NSW Code of Practice (2019) 'How to Safely Remove Asbestos' as summarised in **Appendix H**.

12.5 AEC-R05

AEC-R05 comprised preliminary AECs; AEC5, AEC14, AEC15, AEC18, AEC19, AEC20, AEC21, AEC29 and AEC31. The revised AEC covers an area of approximately 4,700m^2 within the centre of the Site. At the time of the DSI scope of works, AEC-R05 was characterised by large areas of shallow, uncontrolled fill containing fragments of non-friable asbestos containing materials. Asbestos impacted soils within AEC-R05 varied in depth between 0.1mbgl and 0.5mbgl.

NATA accredited laboratory analysis of soil samples for previously identified CoPC reported the following exceedances of SAC:

- A15/TP1-0.2: Lead (404mg/kg > HIL 'A' 300mg/kg);
- A15/TP4-0.2: Lead (463mg/kg > HIL 'A' 300mg/kg);
- A19/TP4-0.1: E. Coli (>35,000mg/kg > NSW EPA Biosolids 100mg/kg);
- A19/TP4-0.1: Faecal Coliforms (>35,000 > NSW EPA Biosolids 1,000mg/kg)
- A29/TP1-0.1: E. Coli (>42,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A29/TP1-0.1: Faecal Coliforms (>42,000mg/kg > NSW EPA Biosolids 1,000mg/kg)
- A29/TP2-0.1: E. Coli (7,800mg/kg > NSW EPA Biosolids 100mg/kg)
- A29/TP2-0.1: Faecal Coliforms (7,800mg/kg > NSW EPA Biosolids 1,000mg/kg)

The remaining sample locations within AEC-R05 reported concentrations of chemical CoPC below the NEPM (2013) HIL 'A' investigation levels for residential Sites. The presence of non-friable ACM throughout AEC-R05 was considered an exceedance of the aesthetic criteria for residential land use.

AEC-R05, as identified in **Figure 10**, requires remediation works prior to Site development.

12.6 AEC-R06

AEC-R06 (formerly AEC35) comprised an area of historical, uncontrolled fill within, and adjacent to a localised waterway on the eastern boundary of the Site. AEC-R06 covered an area of approximately 600m^2 and, at the time of the DSI scope of works, was characterised by localised bury pit with foreign materials and non-putrescible waste including building materials, vehicle parts and engines, and fragments of asbestos containing material. Fill within AEC-R06 was located at depths of ~0.5mbgl, however maximum depths cannot be confirmed due the limited accessibility within the waterway.

NATA accredited laboratory analysis of soil samples for previously identified CoPC reported the following exceedances of SAC:

- A35/TP3-0.2: Lead (425mg/kg > HIL 'A' 300mg/kg); and
- A35/TP3-0.2: Zinc (13,700mg/kg > HIL 'A' 7,400mg/kg).

The remaining sample locations or analytes within AEC-R06 reported concentrations of chemical CoPC below the NEPM (2013) HIL 'A' investigation levels for residential Sites. The presence non-friable ACM throughout AEC-R06 was considered an exceedance of the aesthetic criteria for residential land use.

In addition to soil analysis, NATA accredited laboratory analysis was also conducted for surface waters adjacent to the Fill. Concentrations of BTEX, TRH, PH and EC were reported below the Trigger Values for the protection of 95% of freshwater species (ANZG 2018). Concentrations of heavy metals within the surface water were generally reported in exceedance of the adopted SAC, as summarised below:

- A35/SW01: Cadmium (6.7ug/L > 0.29ug/L HMTV)
- A35/SW01: Chromium (3ug/L > 1.39ug/L HMTV)
- A35/SW01: Copper (30ug/L > 1.98ug/L HMTV)
- A35/SW01: Lead (18ug/L > 15.52ug/L HMTV)
- A35/SW01: Zinc (1,940ug/L > 11.29ug/L HMTV).

Following the detection of SAC exceedances in surface waters adjacent the Fill, supplementary sampling was undertaken in surface waters adjacent the up-stream (A35/SW-NTH) and down-stream (A35/SW-STH) Site boundaries. In general, CoPC in the up-stream sample (A35/SW-NTH) reported concentrations below the laboratory LOR or SAC, with the exception of the following heavy metals:

- A35/SW NTH: Chromium (3 µg/L > HMTV 1.39µg/L);
- A35/SW NTH: Copper (19 µg/L > HMTV 1.98 µg/L); and

- A35/SW NTH: Zinc (42 µg/L > HMTV 11.29 µg/L).

ENRS note that all CoPC in the down-stream sample location (A35/SW-STH) reported concentrations below the laboratory LOR or adopted SAC. The results indicate that there are no current off-Site impacts from extending from the AEC.

AEC-R06, as identified in **Figure 10**, requires remediation works prior to Site development.

12.7 AEC-R07

AEC-R07 comprised part of former AEC28, which contained livestock yards surrounding the Sites previously operational dairy. AEC-R07 covered an area of approximately 4,200m^2 and, at the time of the DSI scope of works, was characterised by two (2) separated areas; cattle holding/feeding yards with exposed surface soils and a grassed horse paddock.

NATA accredited laboratory analysis of soil samples for previously identified CoPC reported the following exceedances of SAC:

- A28/TP5-0.3: C16-C34 (440mg/kg > EIL/ESL for coarse soil 300mg/kg);
- A28/TP1-0.1: E. Coli (>29,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A28/TP1-0.1: Faecal Coliforms (>29,000mg/kg > NSW EPA Biosolids 1,000mg/kg)
- A28/TP5-0,1: E. Coli (>48,000mg/kg > NSW EPA Biosolids 100mg/kg)
- A28/TP5-0,1: Faecal Coliforms (>48,000mg/kg > NSW EPA Biosolids 1,000mg/kg)

The remaining sample locations or analytes within AEC-R06 reported concentrations of chemical CoPC below the NEPM (2013) HIL 'A' investigation levels for residential Sites.

In addition to soil analysis, two (2) isolated fragments of AC sheeting were identified on separate areas of ground surface within AEC-R07. The source of both fragments is unknown and the identified ACM removed for sampling and analysis.

AEC-R07, as identified in **Figure 10**, requires remediation works prior to Site development

Table 18: Refined CSM (AECs and Known Contaminants of Concern)

Areas of Environmental Concern (AEC)	Historical Activities	Source & affected media	Known CoC	Pathway	Receptor	Pathway Status
AEC-R01	Formerly AEC13, AEC22, AEC24	Shallow soils / fill	Asbestos (non-friable)	Dust, airborne	Site users, construction workers	Incomplete unless disturbed
AEC-R02	Formerly AEC36	Stockpiled soil / fill	Heavy Fraction (C16-34) Hydrocarbons	Dust, airborne, ingestion, dermal, soil	Site users, construction workers	Incomplete unless disturbed
AEC-R03	Formerly AEC17	Shallow soils / fill	Lead Asbestos (non-friable)	Dust, airborne, ingestion, dermal, soil	Site users, construction workers	Incomplete unless disturbed
AEC-R04	Formerly AEC33	Gravel ring-road	Asbestos (friable)	Dust, airborne	Site users, construction workers	Complete
AEC-R05	Formerly AEC05, AEC14, AEC15, AEC18, AEC19, AEC20, AEC21, AEC29, AEC31	Shallow soils / fill	Lead Asbestos (non-friable)	Dust, airborne, ingestion, dermal, soil	Site users, construction workers	Incomplete unless disturbed
AEC-R06	Formerly AEC35	Fill, water	Lead Zinc Asbestos (non-friable)	Dust, airborne, ingestion, dermal, soil, water	Site users, construction workers, surface waters, fauna	Incomplete unless disturbed
AEC-R07	Formerly AEC28	Shallow soils	Pathogens Asbestos (non-friable), Hydrocarbons	Dust, airborne, ingestion, dermal, soil	Site users, construction workers	Incomplete unless disturbed

12.8 PATHWAYS & RECEPTORS

Given the primary source of potential contamination is associated with generally shallow soils and associated surface waters at the Site, the primary contaminant migration and exposure pathways are likely to include:

- Inhalation and or ingestion of dust or air bound contaminants primarily during site works by site users and neighbouring properties.
- Disturbance of materials by future Site users.

The receptors comprise:

- Human health – dermal / ingestion / inhalation - excavations, dust, fibres – Site personnel day time site users;
- Adjacent ecological receptors (aquatic ecosystems); and
- Stormwater and surface waters – runoff and connectivity with waterways.

12.9 DATA GAPS & UNCERTAINTY

The following points summarise the areas not accessed during the scope of works and associated data gaps or uncertainty which may require further consideration during future works:

- Areas nearby active underground services and public roads, such as former AEC33. ENRS note that test pits were installed to avoid underground services at the Site. While the three (3) discrete samples taken from material underlying the roadway reported concentrations of CoPC below the adopted SAC, future works within the area should be undertaken in accordance with an Unexpected Finds Protocol (UFP);
- No hazardous materials (HAZMAT) building surveys were undertaken as part of this scope of works. ENRS recommend a HAZMAT survey is conducted prior to any future demolition works occurring at the Site, as required by the Code of Practice;
- No assessment of ground conditions underlying building footprints was undertaken during this assessment. Future works within these areas should be undertaken in accordance with an UFP;
- This PSI and DSI did not include a search of SafeWork NSW Dangerous Goods licences. Records reviewed during this DSI were considered adequate to identify any potential hazardous chemicals kept onsite;
- This assessment did not include the sampling or inspection of groundwater at the Site. No groundwater was encountered at the site and no groundwater users were identified in proximity to the site. The refined AECs identified by this assessment comprise shallow soil and associated surface water which is considered not in direct hydraulic connection with groundwater in the area, which is characterised by deep fractured rock aquifers. Hence, the investigation results did not trigger further investigation of groundwater;
- This DSI did not include assessment of soil gas or vapour at the Site. Tier 1 comparison of laboratory results for key CoPC against the adopted SAC reported satisfactory results. PID

screening of soil samples reported 0 ppm readings. No significant visual or olfactory evidence of contamination was observed during the Site works. Hence, the requirement for soil gas and vapour sampling was not triggered during the scope of works.

13.0 CONCLUSIONS & RECOMMENDATIONS

13.1 CONCLUSIONS

Based on the available information reviewed and site-specific data collected during the scope of works the following conclusions and recommendations are provided:

- The tasks completed during this investigation have met the project objectives set out in **Section 1.2**;
- Site history records documented in the PSI (CS;2021) indicated that the site has been used for rural-residential purposes since circa 1949. Between 1949 and 2010, the demolition and construction of multiple buildings across the Site had occurred;
- Based on the proposed development of a residential subdivision, the appropriate Site Assessment Criteria (SAC) adopted for this assessment was ASC NEPM HIL 'A' (2013) for residential land use with accessible soil;
- NATA accredited laboratory results for CoPC including TRHs, BTEX, PAHs, heavy metals, pesticides, and pathogens were generally reported below the SAC. Chemical exceedances of the adopted SAC were reported in three (3) areas of the Site; AEC-R02, AEC-R05 and AEC-R06, as summarised in **Table 17** and **Figure 7**;
- NATA accredited laboratory results for asbestos identification and asbestos in soil reported multiple positive detections across the Site. Asbestos impacted soils were identified in the following areas of the Site; AEC-R01, AEC-R03, AEC-R04, AEC-R05, AEC-R06 and AEC-R07, as summarised in **Table 17** and **Figure 9**;
- AEC-R04 was reported to contain friable asbestos associated with historical fragments weathered in gravel. All other AECs containing asbestos containing materials were assessed as non-friable (bonded)
- Based on the result of this DSI, the Areas of Environmental Concern (AECs) and extent of contamination identified at the Site included the following revised AECs. Revised AECs are also outlined in **Figure 10**.
    - **AEC-R01**: ~1,000m^2 of shallow asbestos impacted soils on the southern side of the Sites northern residential dwellings. AEC-R01 comprised preliminary AECs AEC13, AEC22 and AEC24.
    - **AEC-R02**: ~40m^3 stockpile of soil, vegetation, and non-putrescible waste with heavy fraction (C16-C34) hydrocarbons. AEC-R02 comprised preliminary AEC36.
    - **AEC-R03**: ~400m^2 of uncontrolled fill and reworked natural ground within the centre of the Site. Isolated fragments of non-friable ACM and one (1) presumed isolated pocket

of historical fill with chemical exceedances of SAC. AEC-R03 comprised preliminary AEC17.

- **AEC-R04**: ~500m^2 of aggregate roadway with laboratory exceedance of friable asbestos. Depth of asbestos impacted gravel varied between 0.2 and 0.5mbgl. AEC-R04 comprised part of preliminary AEC33.
- **AEC-R05**: ~4,700m^2 of shallow asbestos impacted soils within the centre of the Site with chemical exceedances of SAC. Depth of asbestos impacted soils varied between 0.1 and 0.5mbgl. AEC-05 comprised preliminary AECs AEC5, AEC14, AEC15, AEC18, AEC19, AEC20, AEC21, AEC29 and AEC31.
- **AEC-R06**: ~600m^2 of historical, uncontrolled Fill within and adjacent to a localised waterway on the eastern boundary of the Site. Non-friable ACM and chemical exceedances of SAC reported within soil samples from the Fill. Chemical exceedances of SAC also reported in surface water samples from the waterway. AEC-R06 comprised preliminary AEC35.
- **AEC-R07**: ~4,200m^2 of livestock yards surrounding the Sites previously operational dairy. AEC-R07 characterised by two (2) separated areas; cattle holding/feeding yards with exposed surface soils and a grassed horse paddock. Chemical exceedances of SAC reported, and two (2) isolated ACM fragments of unknown origin identified. AEC-R07 comprised part of former AEC28.

- Groundwater was not encountered during the scope of works and no further assessment was triggered based on the shallow nature of AECs in soil and associated surface water not in hydraulic connection with the deep underlying fracture rock aquifers;
- Based on the results of this DSI, the Site is assessed to comprise seven AECs with shallow soil and associated surface water, and is capable of being made suitable for the proposed development in accordance with NSW State Environmental Planning Policy No. 55 (SEPP55) pending the completion of remediation works and subsequent validation of the revised Areas of Environmental Concern as delineated in **Figure 10**.

13.2 RECOMMENDATIONS

Based on the findings of this DSI, the following recommendations are provided:

- Restrict access to AEC-R04 pending a clearance certificate. The area is required to be made safe in general accordance with the SafeWork NSW Code of Practice (2019) 'How to Safely Remove Asbestos' as summarised in **Appendix H**.
- Disturbance of materials with potential to disturb friable asbestos should be supervised by a Class 'A' licenced asbestos removal contractor and bonded / non-friable work by a Class 'B', in accordance with the Code of Practise; How to safely remove asbestos (SafeWork NSW, 2019);
- Avoid disturbance of remaining AECs where non-friable asbestos containing materials were identified;

- Select an appropriate remediation method for the reported exceedances deemed not suitable for residential land use and the proposed development. Based on the detection for both bonded and friable asbestos, a combination of the three (3) methods below may be considered feasible. Consideration should be given to quantities of material, regulatory requirements, impacts on future works and land values. Appropriate remediation methods may include;
  - Excavation and offsite disposal;
  - Excavation and onsite encapsulation; or
  - Manual emu picking of asbestos fragments.
- Preparation of a Remediation Action Plan (RAP) by a suitably qualified environmental consultant which documents the selected remediation methodology, validation requirements for the identified exceedances. The RAP should be approved by the regulator prior to commencement of site works;
- Remediation works, as specified in the RAP, to be completed and validated prior to the submission of the Subdivision Application to Kiama Municipality Council;
- In the event that material is required to be disposed off-Site, materials must be accompanied by a Waste Classification Certificate in accordance with the NSW EPA Waste Classification Guidelines (2016) prepared by a suitably licenced environmental professional;
- Should any change in Site conditions or incident occur which causes a potential environmental impact, a suitable environmental professional should be engaged to further assess the Site and consider requirements for any additional assessment; and
- This report must be read in conjunction with the attached Statement of Limitations.

14.0 REFERENCES

ANZG (2018). Australian and New Zealand Guidelines for Fresh & Marine Water Quality.

Australian Government National Water Commission (2012). Minimum Construction Requirements for Water Bores in Australia (third Edition).

Australian Government (2011) National Health & Medical Research Council. National Resource Management Ministerial Council. National Water Quality Strategy. Australian Drinking Water Guidelines (v3.3 updated 2016).

Australian Standard (1999) AS4482.2–1999: Guide to the investigation and sampling of sites with potentially contaminated soil – Volatile substances.

Australian Standard (2005) AS4482.1–2005: Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and semi-volatile compounds.

enHEALTH (2005). Management of Asbestos in the Non-Occupational Environment

NEPC (2013). National Environment Protection (Assessment of Site Contamination) Measure.

NSW Department of Environment and Conservation (2007). Guidelines for the Assessment and Management of Groundwater Contamination.

NSW EPA (1995) Sampling Design Guidelines. ISBN 0-7310-3756-1.

NSW EPA (2014). Waste Classification Guidelines. Part 1 Classifying Waste.

NSW EPA (2015). Contaminated Land Management: Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997

NSW EPA (2017). Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme, 3rd ed.

NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated sites. ISBN 0 7310 3892 4.

Safe Work NSW (2019). How to Manage and Control Asbestos in the Workplace Code of Practice

Safe Work NSW (2019). How to Safely Remove Asbestos Code of Practice.

WorkCover NSW (2014). Guidelines for Managing Asbestos in or on Soil.

15.0 LIMITATIONS

This report and the associated services performed by ENRS are in accordance with the scope of services set out in the contract between ENRS and the Client. The scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to Site.

ENRS derived the data in this report primarily from visual inspections, and, limited sample collection and analysis made on the dates indicated. In preparing this report, ENRS has relied upon, and presumed accurate, certain information provided by government authorities, the Client and others identified herein. The report has been prepared on the basis that while ENRS believes all the information in it is deemed reliable and accurate at the time of preparing the report, it does not warrant its accuracy or completeness and to the full extent allowed by law excludes liability in contract, tort or otherwise, for any loss or damage sustained by the Client arising from or in connection with the supply or use of the whole or any part of the information in the report through any cause whatsoever.

Limitations also apply to analytical methods used in the identification of substances (or parameters). These limitations may be due to non-homogenous material being sampled (i.e. the sample to be analysed may not be representative), low concentrations, the presence of 'masking' agents and the restrictions of the approved analytical technique. As such, non-statistically significant sampling results can only be interpreted as 'indicative' and not used for quantitative assessments.

The data, findings, observations, conclusions and recommendations in the report are based solely upon the state of Site at the time of the investigation. The passage of time, manifestation of latent conditions or impacts of future events (e.g. changes in legislation, scientific knowledge, land uses, etc) may render the report inaccurate. In those circumstances, ENRS shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of the report.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the provisions of the agreement between ENRS and the Client. ENRS accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon this report by any third party or parties.

This report is to be independently reviewed by NSW Site Auditor Brad May of *Epic Environmental* prior to issuing to the local authority.

It is the responsibility of the Client to accept if the Client so chooses any recommendations contained within and implement them in an appropriate, suitable and timely manner.

TABLES

ENRS
ENVIRONMENT & NATURAL RESOURCES SOLUTIONS

Table 19: Total Concentration Results - Soil
Allen Price & Scarratts: 48 Campbell St, Gerringong

Analyte			Organochlorine Pesticides (OCP)											BTEX					Total Recoverable Hydrocarbons								Polycyclic Aromatic Hydrocarbons (PAHs)				Microbiological									Asbestos		< ASC NEPM Suitability for Re-Use On Site
			Aldrin	Dieldrin	Chlordane	DDT, DDD & DDE	Endrin	Endosulfan	Heptachlor	Methoxychlor	Organophosphate Pesticides (OPP)	Total PCB's	Total Phenols	Benzene	Toluene	Ethyl benzene	m+p-Xylene	o-Xylene	TRH C6-C9	TRH C10-C36	F1 TRH C6-C10	F2 TRH C10-C16	F3 TRH C16-C34	F4 TRH C34-C40	Total TRH C10-C40	Naphthalene	Benzo(a)pyrene	Benzo(a)pyrene TEQ	Total Positive PAHs	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	E.Coli	Faecal Coliforms	Salmonella Sp.	FA & AF (Friable Asbestos)	Bonded ACM	
Site Assessment Criteria - NEPM (2013) Soil Investigation Levels (mg/kg)																																									
EIL/ESL (Areas of ecological significance)		Coarse	-	-	-	3	-	-	-	-	-	-	-	*10*	*10*	*1.5*	*10*	*10*	-	-	*125*	*25*	-	-	-	*10*	*3*	-	-	*40*	-	-	270 (pH6)	470	-	-	-	-	-	-	-	
		Fine				3								*10*	*65*	*40*	*1.6*	*1.6*			*125*	*25*				*10*	*3*			*40*			270 (pH6)	470								
HIL 'A' (Res_Prim. Sch. & Accessible Soil)			6	6	50	240	10	270	6	300	160	1	3000	-	-	-	-	-	-	-	-	-	-	-	-	-	3	300	100	20	100	6000	300	40	400	7400	100****	1000****	0.0	-	130000**	7800**	-	-	
HSL 'A' & 'B'	SAND	0-1m	-	-	-	-	-	-	-	-	-	-	-	0.5	160	55	40	40	-	-	45	110	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1-2m	-	-	-	-	-	-	-	-	-	-	-	0.5	220	NL	60	60	-	-	70	240	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2-4m	-	-	-	-	-	-	-	-	-	-	-	0.5	310	NL	95	95	-	-	110	440	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		>4m	-	-	-	-	-	-	-	-	-	-	-	0.5	540	NL	170	170	-	-	200	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SILT	0-1m	-	-	-	-	-	-	-	-	-	-	-	0.8	390	95	95	NL	-	-	40	230	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1-2m	-	-	-	-	-	-	-	-	-	-	-	0.7	NL	210	210	NL	-	-	65	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2-4m	-	-	-	-	-	-	-	-	-	-	-	1	NL	NL	NL	NL	-	-	100	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		>4m	-	-	-	-	-	-	-	-	-	-	-	2	NL	NL	NL	NL	-	-	190	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001%	0.01%
	CLAY	0-1m	-	-	-	-	-	-	-	-	-	-	-	0.7	480	NL	110	110	-	-	50	280	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1-2m	-	-	-	-	-	-	-	-	-	-	-	1	NL	NL	310	310	-	-	90	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2-4m	-	-	-	-	-	-	-	-	-	-	-	2	NL	NL	NL	NL	-	-	150	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		>4m	-	-	-	-	-	-	-	-	-	-	-	3	NL	NL	NL	NL	-	-	290	NL	-	-	-	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Management Limits (Res_ parkland & public space)		Coarse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700	1000	2500	10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Fine																			800	1000	3500	10000																		
EIL / ESL (Urban residential & public space)		Coarse	-	-	-	180	-	-	-	-	-	-	-	*50*	*85*	*70*	*105*	*105*	-	-	*180*	*120*	*300*	*2800*	-	170	*3*	-	300	100	-	-	800(pH8)	1100	-	-	-	-	-	-	-	
		Fine	-	-	-	180	-	-	-	-	-	-	-	65	105	125	45	45	-	-	180	120	1300	5600	-	170	3	-	300	100	-	-	800(pH8)	1100	-	-	-	-	-	-	-	
Total Concentrations - PQL			0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.1	0.5	0.2	0.5	0.5	0.5	0.5	0.5	10	50	10	50	100	100	50	0.5	0.5	0.5	0.5	5	1	2	5	5	0.1	2	5	10	10	10	10	0.001	
Area	ID / Depth (m)	Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MPN/g	MPN/g	MPN/g	mg/kg	mg/kg	mg/kg	mg/kg	% w/w	
AEC01	A1/TP1+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	8	169	11	<0.1	8	50	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC04	A4/TP1+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	13	52	15	<0.1	3	13	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC06	A6/TP1+0.1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	16	65	32	<0.1	9	68	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC07-08	A7-8/SP1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	300	<10	<50	230	120	350	<0.5	<0.5	1.2	<0.5	8	<1	23	92	124	0.2	12	229	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC09	A9/TP1+0.1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	17	<1	32	110	198	0.1	13	311	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC10	A10/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	140	<100	140	<0.5	<0.5	1.2	<0.5	13	<1	13	82	71	<0.1	9	144	----	----	----	----	----	----	----	0.0000%	0.0000%	
	A10/DUP1+0.2		----	----	----	----	----	----	----	----	----	----	----	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	10	75	46	<0.1	7	104	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
	A10/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	200	<100	200	<0.5	0.7	1.5	6.5	7	<1	14	82	119	<0.1	9	148	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC11	A11/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	20	81	84	0.1	10	160	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
	A11/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	130	<100	130	<0.5	<0.5	1.2	0.8	<5	<1	18	86	74	<0.1	9	159	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC12	A12/SP1+1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	11	119	106	<0.1	8	149	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC13	A13/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	23	89	39	0.1	12	143	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC14	A14/TP1+0.1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	1	11	1	40	117	77	0.1	19	550	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
	A14/TP3+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	11	<1	37	119	95	<0.1	14	1200	----	----	----	----	----	----	----	0.0000%	0.0002%	
AEC15	A15/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	140	<100	140	<0.5	<0.5	1.2	3.7	12	<1	23	123	404	0.4	11	1410	----	----	----	----	----	----	----	0.0000%	0.0004%	
	A15/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	120	<100	120	<0.5	<0.5	1.2	0.6	<5	<1	6	<5	128	105	0.1	16	3425	----	----	----	----	----	----	----	0.0000%	0.0025%	
	A15/TP3+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	9	2	25	110	262	0.2	19	977	----	----	----	----	----	----	----	0.0000%	0.0067%	> SAC
	A15/TP4+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	180	<100	180	<0.5	0.7	1.5	6.8	10	1	30	176	463	1	15	1960	----	----	----	----	----	----	----	0.0000%	0.0039%	
	A15/TP5+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	6	<1	28	98	116	0.2	13	410	----	----	----	----	----	----	----	0.0000%	0.0121%	
	A15/TP6+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	120	<100	120	<0.5	0.6	1.4	5.3	6	<1	20	126	141	0.3	12	297	----	----	----	----	----	----	----	0.0000%	0.0027%	
AEC16	A16/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	200	110	310	<0.5	<0.5	1.2	0.6	<5	<1	16	105	27	<0.1	10	204	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC17	A17/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	6	<1	26	72	29	15.5	14	53	----	----	----	----	----	----	----	0.0000%	0.0135%	
	A17/SP1+1		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	5	<1	22	10	8	<0.1	5	28	----	----	----	----	----	----	----	0.0000%	0.0000%	> SAC
	A17/TP3+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	9	3	24	183	630	0.6	17	2930	----	----	----	----	----	----	----	0.0000%	0.0000%	3
	A17/TP3+0.7		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	34	65	22	<0.1	15	50	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC18	A18/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	181	<5	<0.1	5	38	----	----	----	----	----	----	----	0.0000%	0.0001%	
	A18/DUP2+0.2		----	----	----	----	----	----	----	----	----	----	----	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	184	<5	<0.1	5	37	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
	A18/TP2+0.4		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	294	6	<0.1	6	42	----	----	----	----	----	----	----	0.0000%	0.0000%	
	A18/TP4+0.6		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	185	<5	<0.1	5	36	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC19	A19/TP2+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	<13	<13	Not Detected	----	----	----	----	0.0000%	0.0017%	
	A19/TP2+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	180	<10	<50	210	130	340	<0.5	<0.5	1.2	<0.5	15	<1	18	125	58	<0.1	14	660	----	----	----	----	----	----	----	0.0000%	0.0031%	> SAC
	A19/TP4+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	>35000	>35000	Not Detected	----	----	----	----	0.0000%	0.0000%	
	A19/TP4+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	6	<1	24	80	27	<0.1	15	170	----	----	----	----	----	----	----	0.0000%	0.0003%	
AEC20	A20/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	340	<10	<50	290	130	420	<0.5	<0.5	1.2	<0.5	6	<1	27	111	268	0.1	12	446	----	----	----	----	----	----	----	0.0000%	0.0000%	
	A20/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	200	<10	<50	220	150	370	<0.5	<0.5	1.2	<0.5	<5	<1	10	133	44	<0.1	7	113	----	----	----	----	----	----	----	0.0000%	0.0005%	< SAC
	A20/TP3+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	5	<1	22	124	101	0.2	14	228	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC22	A22/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	5	<1	14	158	49	0.1	9	147	----	----	----	----	----	----	----	0.0000%	0.0003%	< SAC
AEC23	A23/TP1+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	226	<5	<0.1	6	42	----	----	----	----	----	----	----	0.0000%	0.0000%	
	A23/DUP3+0.3		----	----	----	----	----	----	----	----	----	----	----	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	<2	174	<5	<0.1	5	37	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC24	A24/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	24	92	26	0.1	12	52	----	----	----	----	----	----	----	0.0000%	0.0034%	< SAC
AEC25	A25/TP1+0.5		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	27	71	27	<0.1	9	56	<14	<14	Not Detected	----	----	----	----	0.0000%	0.0000%	< SAC
	A25/TP3+0.5		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	22	75	24	0.1	11	47	<14	<14	Not Detected	----	----	----	----	0.0000%	0.0000%	
AEC28	A28/TP1+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	>29000	>29000	Not Detected	----	----	----	----	0.0000%	0.0000%	
	A28/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	120	<10	<50	120	100	220	<0.5	<0.5	1.2	<0.5	<5	<1	8	148	17	<0.1	7	87	----	----	----	----	----	----	----	0.0000%	0.0000%	> SAC
	A28/TP5+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	>48000	>48000	Not Detected	----	----	----	----	0.0000%	0.0000%	
	A28/TP5+0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.8	<0.2	<0.5	<0.5	<0.5	<0.5	<10	750	<10	<50	440	470	910	<0.8	<0.8	1.9	<0.5	<5	<1	13	69	38	<0.1	8	241	----	----	----	<20	4.8	0.1	370	800	0.0000%	0.0000%	
AEC29	A29/TP1+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	>42000	>42000	Not Detected	----	----	----	----	0.0000%	0.0002%	
	A29/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	6	<1	30	104	46	<0.1	19	118	----	----	----	----	----	----	----	0.0000%	0.0002%	
	A29/TP2+0.1		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7800	7800	Not Detected	----	----	----	----	0.0000%	0.0000%	
	A29/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.8	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	150	<100	150	<0.8	<0.8	2.4	<0.5	<5	<1	13	74	39	<0.1	9	319	----	----	----	----	----	----	----	0.0000%	0.0000%	
	A29/TP2+0.6		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	1	<1	37	90	20	0.1	14	23	----	----	----	----	----	----	----	0.0000%	0.0000%	
AEC30	A30/TP2+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	<5	<1	25	90	28	0.1	12	186	----	----	----	----	----	----	----	0.0000%	0.0000%	< SAC
AEC31	A31/TP1+0.2		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.1	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<10	<50	<100	<100	<50	<0.5	<0.5	1.2	<0.5	7	<1	31	133	241	0.3

Table 20: 48 Campbell Street, Gerringong
Test Pit Results with comparison against NEPM 2013 HSL 'A' for bonded ACM in soil <0.01%w/w

Test Pit ID	Date	Test Pit Dimensions			Soil Qty		Asbestos Concentration (Field screening)				Comparison against NEPM 2013 HSL c <0.01%w/w	NATA Laboratory Result (screening of >500 g samples sieved to 7mm from 10L)
		Length	Width	Depth	Volume (m^3)	Weight (kg)	No. Fragments	ACM (kg)	Asbestos content	W/W (%)		
A1/TP1	20/11/2021	1.5	0.45	0.8	0.54	972	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A1/TP2	20/11/2021	1.5	0.45	0.8	0.54	972	0	0	15%	0.0000%	< SAC	N/A
A4/TP1	20/11/2021	1.5	0.45	0.8	0.54	972	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A4/TP2	20/11/2021	1.5	0.45	0.8	0.54	972	0	0	15%	0.0000%	< SAC	N/A
A6/TP1	20/11/2021	1.5	0.45	1.0	0.68	1215	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A7-8/SP1	9/11/2021	0.5	0.50	0.4	0.10	180	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A9/TP1	9/11/2021	N/A	N/A	N/A	-	-	0	0	15%	N/A	< SAC	N/A
A10/TP1	9/11/2021	0.3	0.30	0.3	0.03	49	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A10/TP2	9/11/2021	0.3	0.30	0.3	0.03	49	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A11/TP1	9/11/2021	0.3	0.30	0.3	0.03	49	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A11/TP2	9/11/2021	0.3	0.30	0.3	0.03	49	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A12/SP1	20/11/2021	1.5	0.45	1.0	0.68	1215	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A13/TP1	20/11/2021	1.5	0.45	0.2	0.14	243	2	NAD	15%	N/A	< SAC	N/A
A13/TP2	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A13/TP3	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A13/TP4	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A13/TP5	14/12/2021	1.0	0.45	0.2	0.09	162	1	0.015	15%	**0.0014%**	**< SAC**	No Asbestos Detected
A13/TP6	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	N/A
A13/TP7	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	N/A
A13/TP8	14/12/2021	1.0	0.45	0.2	0.09	162	0	0	15%	0.0000%	< SAC	N/A
A14/TP1	19/11/2021	2.0	0.45	0.2	0.18	324	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A14/TP2	19/11/2021	1.5	0.45	0.4	0.27	486	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A14/TP3	19/11/2021	1.5	0.45	0.6	0.41	729	1	0.01	15%	**0.0002%**	**< SAC**	N/A
A31/TP1	19/11/2021	1.5	0.14	0.5	0.11	189	15	0.181	15%	**0.0144%**	**> SAC**	No Asbestos Detected
A15/TP1	19/11/2021	1.5	0.45	0.3	0.20	365	1	0.01	15%	**0.0004%**	**< SAC**	No Asbestos Detected
A15/TP2	19/11/2021	1.5	0.45	0.3	0.20	365	5	0.06	15%	**0.0025%**	**< SAC**	No Asbestos Detected
A15/TP3	19/11/2021	1.5	0.45	0.3	0.20	365	4	0.164	15%	**0.0067%**	**< SAC**	No Asbestos Detected
A15/TP4	19/11/2021	1.5	0.45	0.3	0.20	365	6	0.072	15%	**0.0030%**	**< SAC**	No Asbestos Detected
A15/TP5	19/11/2021	1.5	0.45	0.3	0.20	365	11	0.294	15%	**0.0121%**	**> SAC**	No Asbestos Detected
A15/TP6	19/11/2021	1.5	0.45	0.3	0.20	365	2	0.065	15%	**0.0027%**	**< SAC**	No Asbestos Detected
A16/TP1	20/11/2021	1.5	0.45	0.9	0.61	1094	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A17/TP1	20/11/2021	1.5	0.45	0.3	0.20	365	1	0.329	15%	**0.0135%**	**> SAC**	No Asbestos Detected
A17/TP2	20/11/2021	1.5	0.45	0.4	0.27	486	0	0	15%	0.0000%	< SAC	N/A
A17/TP3	14/12/2021	1.5	0.45	0.7	0.47	851	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A17/TP4	14/12/2021	1.0	0.45	0.6	0.27	486	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A17/TP5	14/12/2021	1.0	0.45	0.5	0.23	405	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A17/SP1	20/11/2021	N/A	N/A	N/A	-	-	2	NAD	15%	N/A	< SAC	No Asbestos Detected
A18/TP1	19/11/2021	2.0	0.45	0.9	0.81	1458	1	0.012	15%	**0.0001%**	**< SAC**	No Asbestos Detected
A18/TP2	19/11/2021	2.0	0.45	0.7	0.63	1134	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A18/TP3	19/11/2021	2.0	0.45	1.4	1.26	2268	0	0	15%	0.0000%	< SAC	N/A
A18/TP4	19/11/2021	2.0	0.45	1.1	0.99	1782	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A19/TP1	19/11/2021	1.2	1.20	0.2	0.29	518	9	0.06	15%	**0.0017%**	**< SAC**	N/A
A19/TP2	19/11/2021	1.5	0.45	0.4	0.27	486	16	0.099	15%	**0.0031%**	**< SAC**	No Asbestos Detected
A19/TP3	19/11/2021	1.5	0.45	0.4	0.27	486	0	0	15%	0.0000%	< SAC	N/A
A19/TP4	19/11/2021	1.5	0.45	0.4	0.27	486	1	0.011	15%	**0.0003%**	**< SAC**	No Asbestos Detected
A20/TP1	19/11/2021	1.5	0.45	0.3	0.20	365	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A20/TP2	19/11/2021	1.5	0.45	0.3	0.20	365	3	0.013	15%	**0.0005%**	**< SAC**	No Asbestos Detected
A20/TP3	19/11/2021	1.5	0.45	0.4	0.27	486	0	0	100%	0.0000%	< SAC	No Asbestos Detected
A20/TP4	19/11/2021	1.5	0.45	0.3	0.20	365	0	0	15%	0.0000%	< SAC	N/A
A22/TP1	20/11/2021	2.0	0.45	0.3	0.27	486	2	0.009	15%	**0.0003%**	**< SAC**	No Asbestos Detected
A23/TP1	20/11/2021	1.5	1.20	0.4	0.72	1296	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A24/TP1	20/11/2021	2.0	0.45	0.2	0.18	324	2	0.074	15%	**0.0034%**	**< SAC**	No Asbestos Detected
A25/TP1	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A25/TP2	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A25/TP3	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A25/TP4	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A28/TP1	20/11/2021	1.5	0.45	0.5	0.34	608	0	0	15%	0.0000%	< SAC	N/A
A28/TP2	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A28/TP3	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A28/TP4	20/11/2021	1.5	0.45	0.1	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A28/TP5	20/11/2021	0.5	0.45	0.3	0.07	122	0	0	15%	0.0000%	< SAC	N/A
A29/TP1	19/11/2021	1.5	0.45	0.4	0.27	486	1	0.007	15%	**0.0002%**	**< SAC**	No Asbestos Detected
A29/TP2	19/11/2021	2.0	0.45	0.4	0.36	648	1	0.008	15%	**0.0002%**	**< SAC**	No Asbestos Detected
A30/TP1	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A30/TP2	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	No Asbestos Detected
A30/TP3	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP1	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP2	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP3	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP4	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP5	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP6	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP7	20/11/2021	1.5	0.45	0.2	0.14	243	0	0	15%	0.0000%	< SAC	N/A
A32/TP8	9/11/2021	0.5	0.5	0.2	0.05	90	0	0	15%	0.0000%	< SAC	N/A
A32/TP9	9/11/2021	0.5	0.5	0.2	0.05	90	0	0	15%	0.0000%	< SAC	N/A
A34/TP1	19/11/2021	1.5	0.45	0.2	0.14	243	1	0.01	15%	**0.0006%**	**< SAC**	No Asbestos Detected
A34/TP2	19/11/2021	1.5	0.45	0.2	0.14	243	1	0.008	15%	**0.0005%**	**< SAC**	No Asbestos Detected
A34/TP3	19/11/2021	1.5	0.45	0.5	0.34	608	6	0.014	15%	**0.0003%**	**< SAC**	**0.001% > SAC**
A34/TP4	19/11/2021	1.5	0.45	0.4	0.27	486	4	0.013	15%	**0.0004%**	**< SAC**	No Asbestos Detected
A35/TP1	20/11/2021	1.5	0.45	0.3	0.20	365	0	0	15%	0.0000%	< SAC	N/A
A35/TP2	20/11/2021	1.5	0.45	0.4	0.27	486	0	0	15%	0.0000%	< SAC	N/A
A35/TP3	20/11/2021	1.5	0.45	0.4	0.27	486	2	0.071	15%	**0.0022%**	**< SAC**	N/A
A35/TP4	20/11/2021	1.5	0.45	0.3	0.20	365	0	0	15%	0.0000%	< SAC	N/A
A35/TP5	14/12/2021	1.5	0.45	0.3	0.20	365	0	0	15%	0.0000%	< SAC	N/A
A36/SP1	20/11/2021	N/A	N/A	N/A	-	-	1	NAD	15%	NAD	< SAC	No Asbestos Detected
A36/SP1	20/11/2021	N/A	N/A	N/A	-	-	0	0	15%	N/A	< SAC	No Asbestos Detected

$$\%w/w\ asbestos\ in\ soil = \frac{Std\ 15\%\ asbestos\ content \times bonded\ ACM\ (kg)}{soil\ volume\ (L) \times soil\ density\ (kg/L)}$$

TABLE 21: Surface Sater Monitoring Event Results
48 Campbell Street, Gerringong, NSW

			Arsenic - Dissolved	Cadmium - Dissolved	Chromium - Dissolved	Copper - Dissolved	Lead - Dissolved	Mercury - Dissolved	Nickel - Dissolved	Zinc	TRH C6 - C9	TRH C10 - C36	F1 TRH C6 - C10	F2 TRH >C10 - C16	F3 TRH >C16 - C34	F4 TRH >C34 - C40	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-xylene	Naphthalene	Benzo (a) Pyrene	Total PAH	Ammonia	Fluoride	Sulphate, SO4 (mg/L)	Nitrate as N in water	Reactive Phosphorus as P	pH - Lab	Electrivcal Conductivity (Lab)	
ANZECC 2000 -Trigger Values for Freshwater (Protection of 95% of Species)			24 (As III)	0.2 (HMTV 0.29)	1.0 (HMTV 1.39)	1.4 (HMTV 1.98)	3.4 (HMTV 15.52)	0.6	11	8 (HMTV 11.29)	-	-	-	-	-	-	950	-	-	200	350	16	-	-	0.9	-	-	0.7	0.02	6.5 - 8.0	2200	
ANZECC 2000 - Trigger Values for long-term Irrigation			100	10	100	200	2000	2	200	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
Australian Drinking Water Guidelines (2016)[C]		Health	10	2	50	2000	10	1	20	-	-	-	-	-	-	-	1	800	300	600	600	-	0.01	-	-	1.5	500	50	-	-	-	
		Aesthetic	-	-	-	1000	-	-	-	3000	-	-	-	-	-	-	-	25	3	20	20	-	-	-	0.5	-	250	-	-	-	-	Comment
Lab Report No.	Sample ID.	Date Sampled																														
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	20	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pH units	µS/cm	
Limit of Reporting			1	0.1	1	1	1	0.1	1	5	10	125	10	50	100	100	1	1	1	2	1	1	1	0.1	0.01	0.1	1	0.005	0.01	0.01	1	
EW2105036	A27-SW01	25/11/2021	<1	<0.1	<1	1	<1	<0.1	<1	<5	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	<0.5	<0.5	0.07	<0.1	5	0.01	<0.01	6.28	194	< SAC
EW2105036	A27-DUP01	25/11/2021	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC
EW2105036	A27-R01	25/11/2021	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC
ES2145701	A35/SW01	14/12/2021	5	6.7	3	30	18	<0.1	7	1940	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	<0.5	<0.5	----	----	----	----	----	6.53	278	> SAC
ES2145701	A35 / DUP2	14/12/2021	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC
ES2145701	A35 / R01	14/12/2021	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC
EW2200244	A35/SW NTH	18/01/2022	8	0.1	3	19	3	0.1	1	42	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	<0.5	<0.5	----	----	----	----	----	6.76	275	> SAC
EW2200244	A35/SW STH	18/01/2022	<1	<0.1	<1	<1	<1	<0.1	<1	<5	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	<0.5	<0.5	----	----	----	----	----	7.01	274	< SAC
EW2200244	A35/DUP3	18/01/2022	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC
EW2200244	A35/R02	18/01/2022	----	----	----	----	----	----	----	----	<20	<50	<20	<100	<100	<100	<1	<2	<2	<2	<2	<5	----	----	----	----	----	----	----	----	----	< SAC

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Table 22: Summary of Relative Percent Differences in Soil Samples

ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A10/TP1-0.2	Blind Field Duplicate A10/DUP1-0.2	RPD %	Intra Lab Triplicate A10/TP1-0.2 T	RPD %
Arsenic	5	<5	<5	0%	<4	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	**13**	**10**	**26%**	**14**	**7%**
Copper	5	**82**	**75**	**9%**	**76**	**8%**
Lead	5	**71**	**46**	**43%**	**59**	**18%**
Mercury	0.1	<0.1	<0.1	0%	<0.1	0%
Nickel	2	**9**	**7**	**25%**	**7**	**25%**
Zinc	5	**144**	**104**	**32%**	**120**	**18%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	0.08	**145%**
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	0.3	**50%**
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	140	<100	**33%**	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	140	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

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Table 23: Summary of Relative Percent Differences in Soil Samples

ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A18/TP1-0.2	Blind Field Duplicate A18/DUP2-0.2	RPD %	Intra Lab Triplicate A18/TP1-0.2 T	RPD %
Arsenic	5	<5	<5	0%	<4	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	<2	**<2**	0%	**1**	67%
Copper	5	**181**	**184**	**2%**	**150**	19%
Lead	5	<5	**<5**	0%	**6**	**18%**
Mercury	0.1	<0.1	**<0.1**	0%	<0.1	0%
Nickel	2	**5**	**5**	**0%**	**4**	**22%**
Zinc	5	**38**	**37**	**3%**	**29**	**27%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	<0.05	0%
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	<0.05	0%
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	<100	<100	0%	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	<50	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

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Table 24: Summary of Relative Percent Differences in Soil Samples

ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A23/TP1-0.3	Blind Field Duplicate A23/DUP3-0.3	RPD %	Intra Lab Triplicate A23/TP1-0.3 T	RPD %
Arsenic	5	<5	**<5**	0%	**<4**	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	<2	**<2**	0%	**1**	**67%**
Copper	5	**226**	**174**	**26%**	**180**	**23%**
Lead	5	<5	**<5**	0%	**5**	0%
Mercury	0.1	<0.1	**<0.1**	0%	<0.1	0%
Nickel	2	**6**	**5**	**18%**	**4**	40%
Zinc	5	**42**	**37**	**13%**	**26**	**47%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	<0.05	0%
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	<0.05	0%
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	<100	<100	0%	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	<50	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Table 25: Summary of Relative Percent Differences in Soil Samples

ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A32/TP1-0.2	Blind Field Duplicate A32/DUP4-0.2	RPD %	Intra Lab Triplicate A32/TP1-0.2 T	RPD %
Arsenic	5	<5	**<5**	0%	**<4**	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	**33**	**26**	**24%**	**19**	**54%**
Copper	5	**79**	**78**	**1%**	**60**	**27%**
Lead	5	**29**	**27**	**7%**	**20**	**37%**
Mercury	0.1	**0.1**	**0.1**	0%	<0.1	0%
Nickel	2	**12**	**13**	**8%**	**8**	**40%**
Zinc	5	**54**	**50**	**8%**	**37**	**37%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	**0.07**	**151%**
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	**0.04**	**170%**
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	<100	<100	0%	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	<50	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Table 26: Summary of Relative Percent Differences in Soil Samples

ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A32/TP9-0.2	Blind Field Duplicate A32/DUP5-0.2	RPD %	Intra Lab Triplicate A32/TP9-0.2 T	RPD %
Arsenic	5	<5	**<5**	0%	**<4**	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	**24**	**24**	0%	**18**	**29%**
Copper	5	**63**	**62**	**2%**	**49**	**25%**
Lead	5	**18**	**18**	0%	**13**	**32%**
Mercury	0.1	<0.1	**<0.1**	0%	<0.1	0%
Nickel	2	**10**	**10**	0%	**6**	**50%**
Zinc	5	**32**	**33**	**3%**	**23**	**33%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	<0.05	0%
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	<0.05	0%
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	<100	<100	0%	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	<50	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Table 27: Summary of Relative Percent Differences in Soil Samples

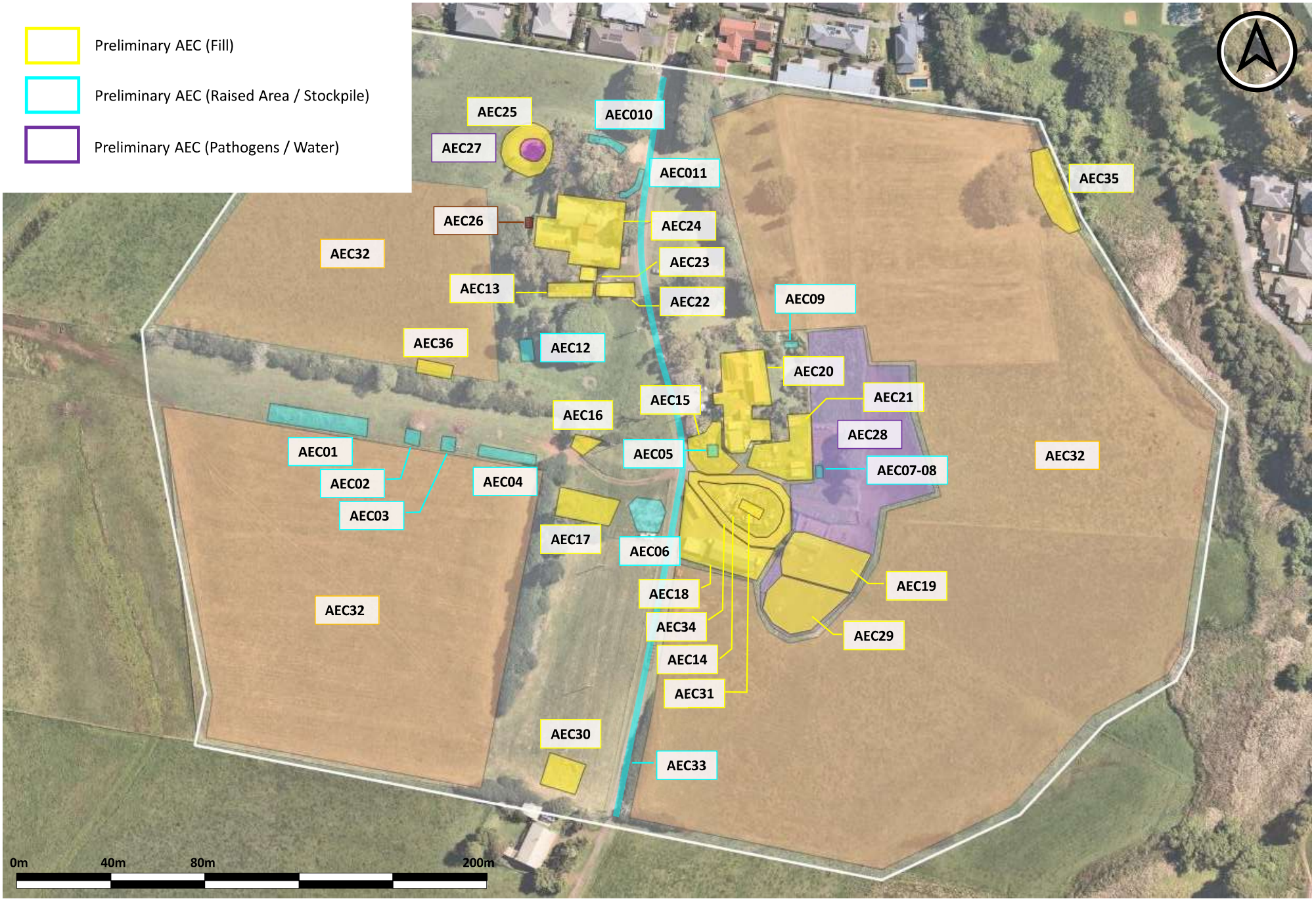
ANALYTE	*Laboratory PQL / LOR*	Primary Sample ID: A35/TP5-0.2	Blind Field Duplicate A35/DUP6-0.2	RPD %	Intra Lab Triplicate A35/TP5-0.2 T	RPD %
Arsenic	5	<5	**<5**	0%	**<4**	0%
Cadmium	1	<1	<1	0%	<0.4	0%
Chromium	2	**16**	**16**	0%	**15**	**6%**
Copper	5	**94**	**97**	**3%**	**110**	**16%**
Lead	5	**16**	**23**	**36%**	**15**	**6%**
Mercury	0.1	**0.1**	**0.1**	0%	0.2	**67%**
Nickel	2	**11**	**11**	0%	**9**	**20%**
Zinc	5	**76**	**128**	**51%**	**52**	**38%**
Naphthalene	0.5	<0.5	<0.5	0%	<0.1	0%
Benzo(a)pyrene	0.5	<0.5	<0.5	0%	<0.05	0%
Benzo(a)pyrene TEQ (zero)	0.5	<0.5	<0.5	0%	<0.5	0%
Sum of polycyclic aromatic hydrocarbons	0.5	<0.5	<0.5	0%	<0.05	0%
Benzene	0.2	<0.2	<0.2	0%	<0.2	0%
Toluene	0.5	<0.5	<0.5	0%	<0.5	0%
Ethyl benzene	0.5	<0.5	<0.5	0%	<1	0%
m+p-Xylene	0.5	<0.5	<0.5	0%	<2	0%
o-Xylene	0.5	<0.5	<0.5	0%	<1	0%
F1 TRH C6-C10	10	<10	<10	0%	<25	0%
F2 TRH C10-C16	50	<50	<50	0%	<50	0%
F3 TRH C16-C34	100	<100	<100	0%	<100	0%
F4 TRH C34-C40	100	<100	<100	0%	<100	0%
Total TRH C10-C40	50	<50	<50	0%	<50	0%

Acceptance criteria for Inorganics RPD<30%
Acceptance criteria for Organics RPD<50%

(AS4482.1-2005) RPD Calculation Method = $\frac{\text{D1-D2}}{\text{Mean Result}} \times 100$

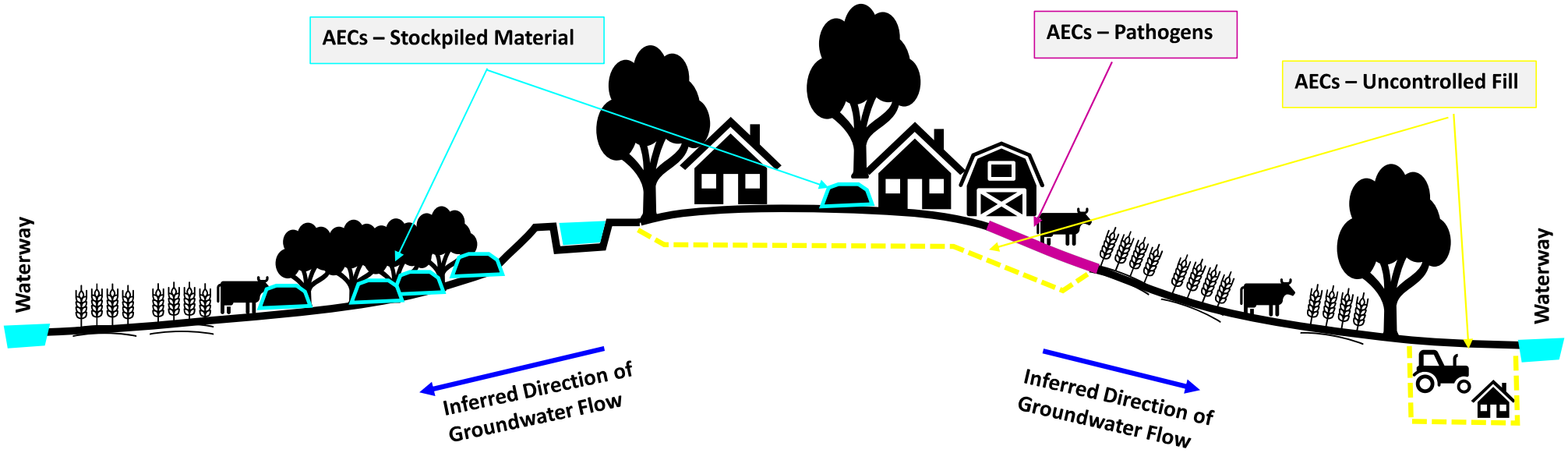
Results below detection limit were assumed to be equal to the PQL/LOR for RPD calculations
Results above the acceptance criteria were assessed to be disregarded if results were <5 x PQL/LOR

Figures

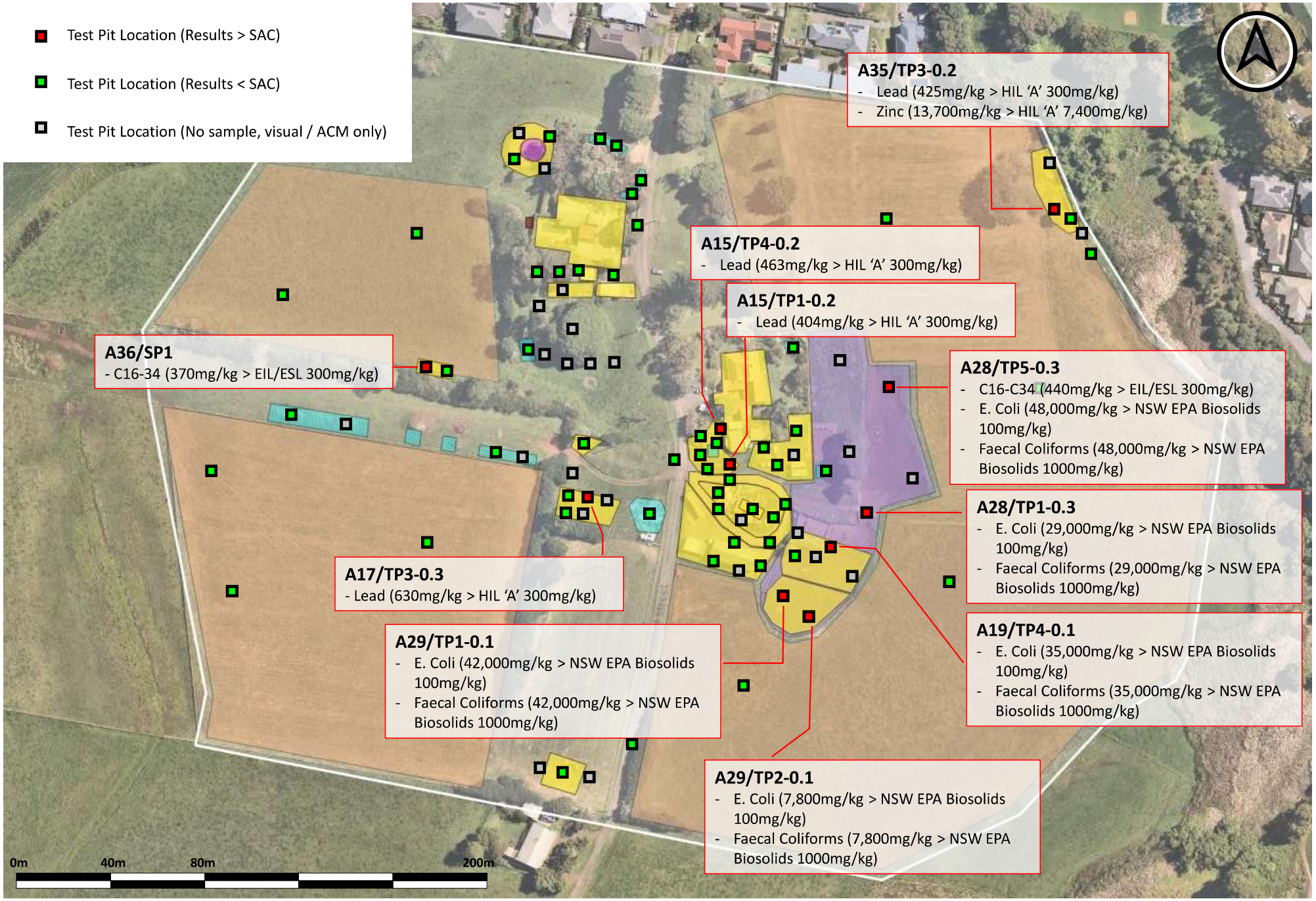


ENRS ENVIRONMENT & NATURAL RESOURCE SOLUTIONS	Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	5
	Project:	ENRS2069	Source:	Google Earth	Date:	As Reported
	Location:	48 Campbell St, Gerringong, NSW.	Scale:	ScaleBar	Title:	Site Plan with Preliminary AECs
			Status:	Rev 1		



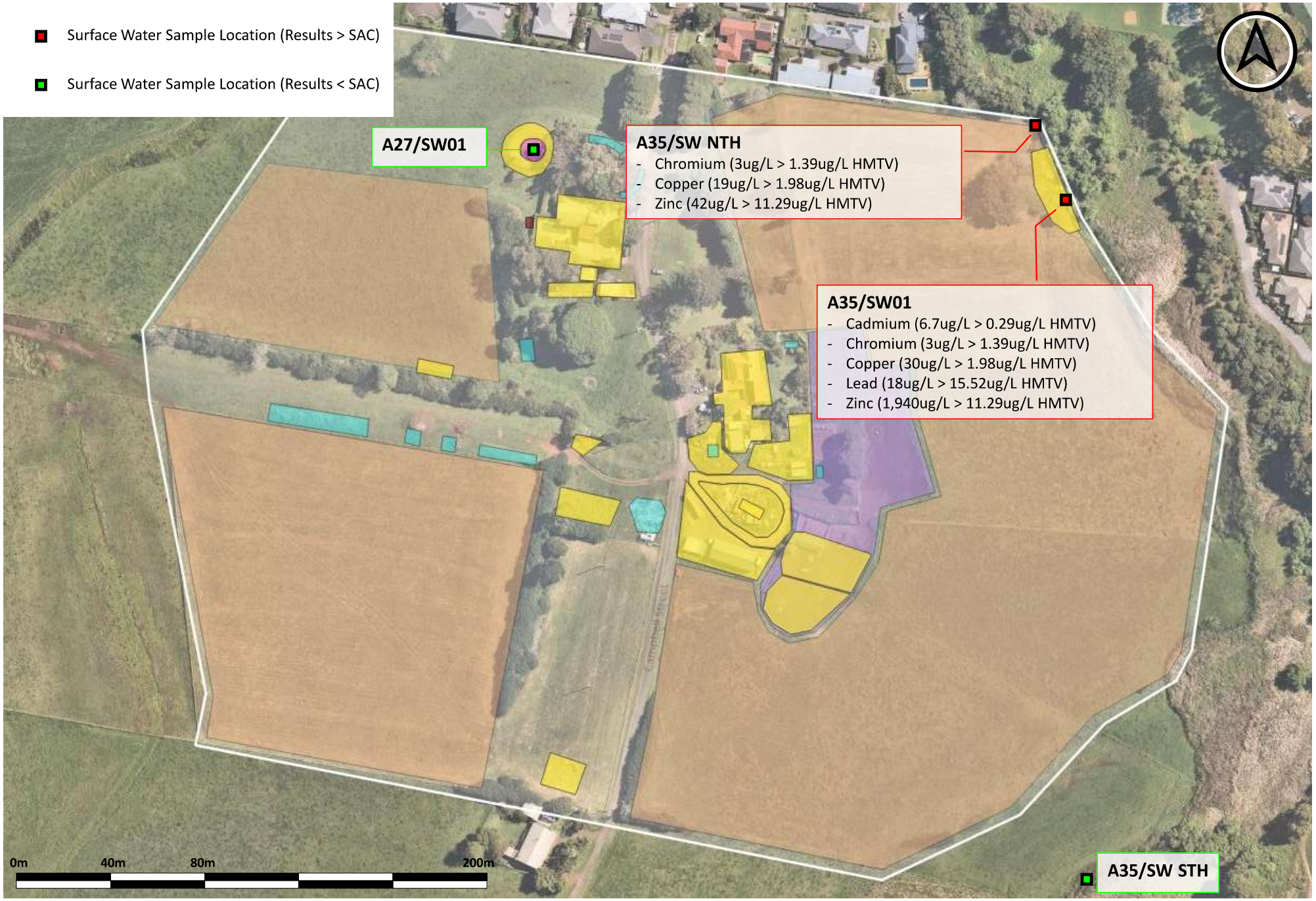


ENRS ENVIRONMENT & NATURAL RESOURCE SOLUTIONS	Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	6
	Project:	ENRS2069	Source:	NearMaps	Date:	As Reported
	Location:	48 Campbell St, Gerringong, NSW.	Scale:	NTS	Title:	Site Plan – Preliminary Conceptual Site Model (CSM)
			Status:	Rev 1		



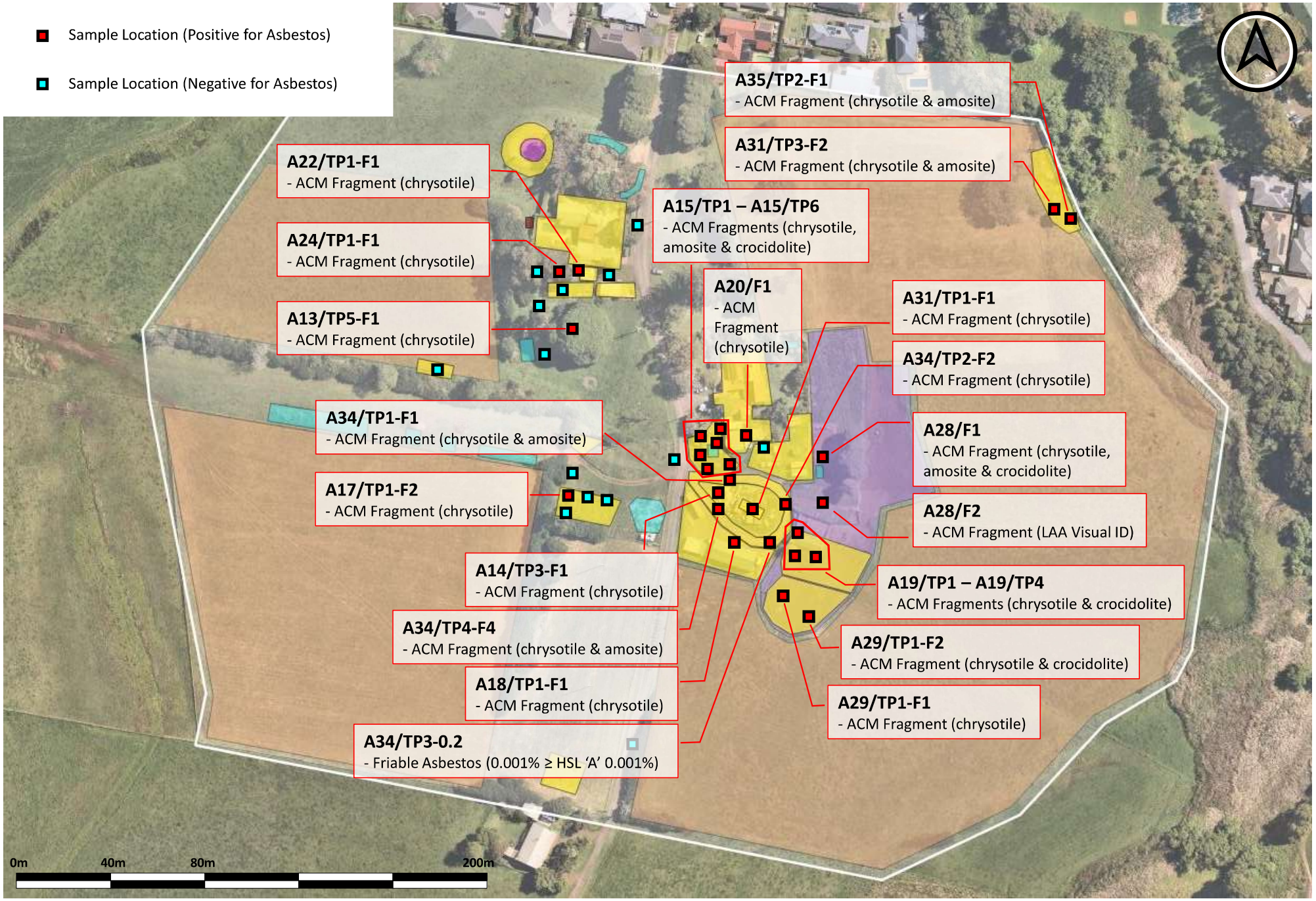
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	7
Project:	ENRS2069	Source:	Google Earth	Date:	As Reported
Location:	48 Campbell St, Gerringong, NSW.	Scale:	ScaleBar	Title:	DSI Sampling Plan (Soil Chemistry) w/ Exceedances
		Status:	Rev 1		



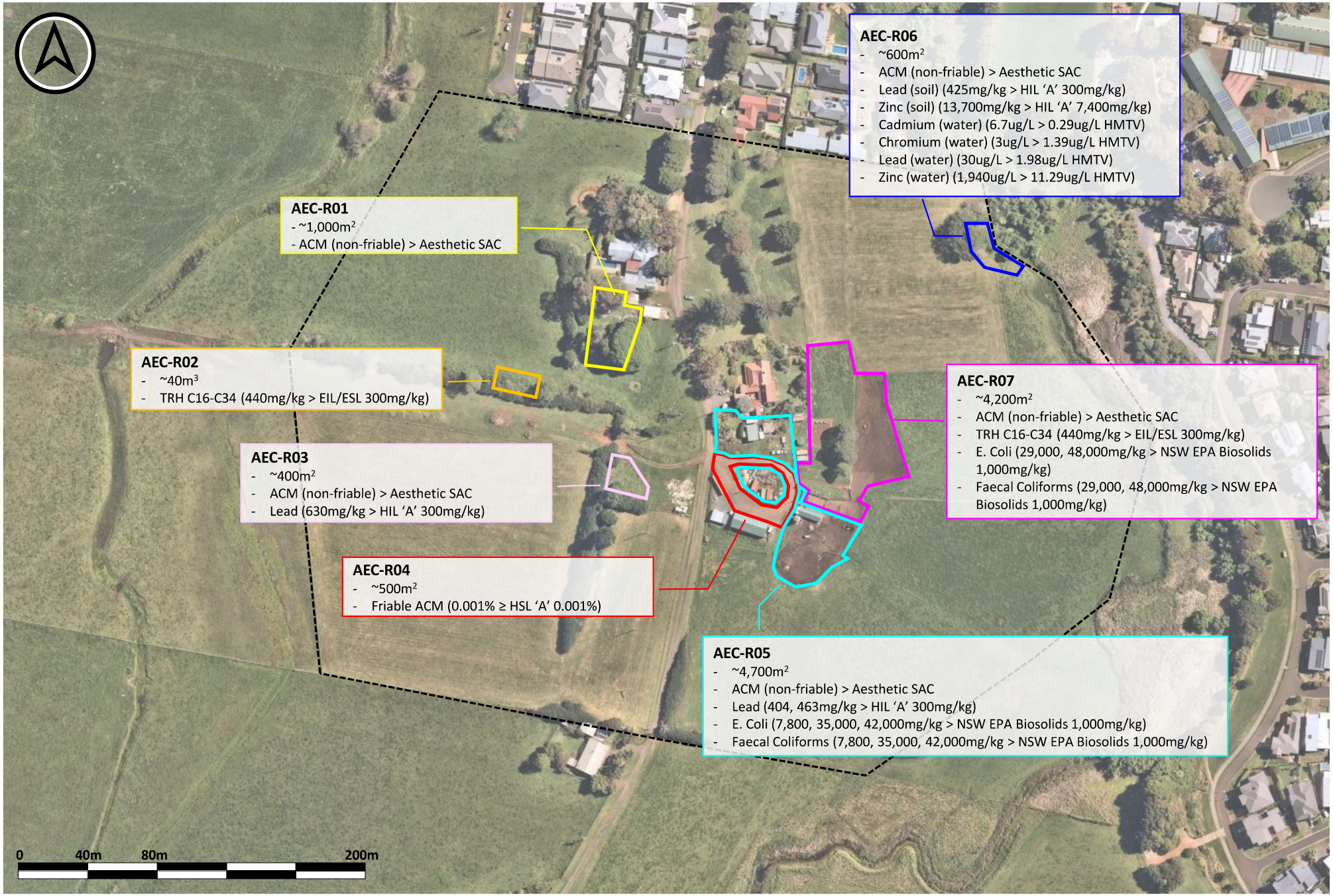
ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	8
Project:	ENRS2069	Source:	Google Earth	Date:	As Reported
Location:	48 Campbell St, Gerringong, NSW.	Scale:	ScaleBar	Title:	DSI Sampling Plan (Surface Water) w/ Exceedances
		Status:	Rev 1		



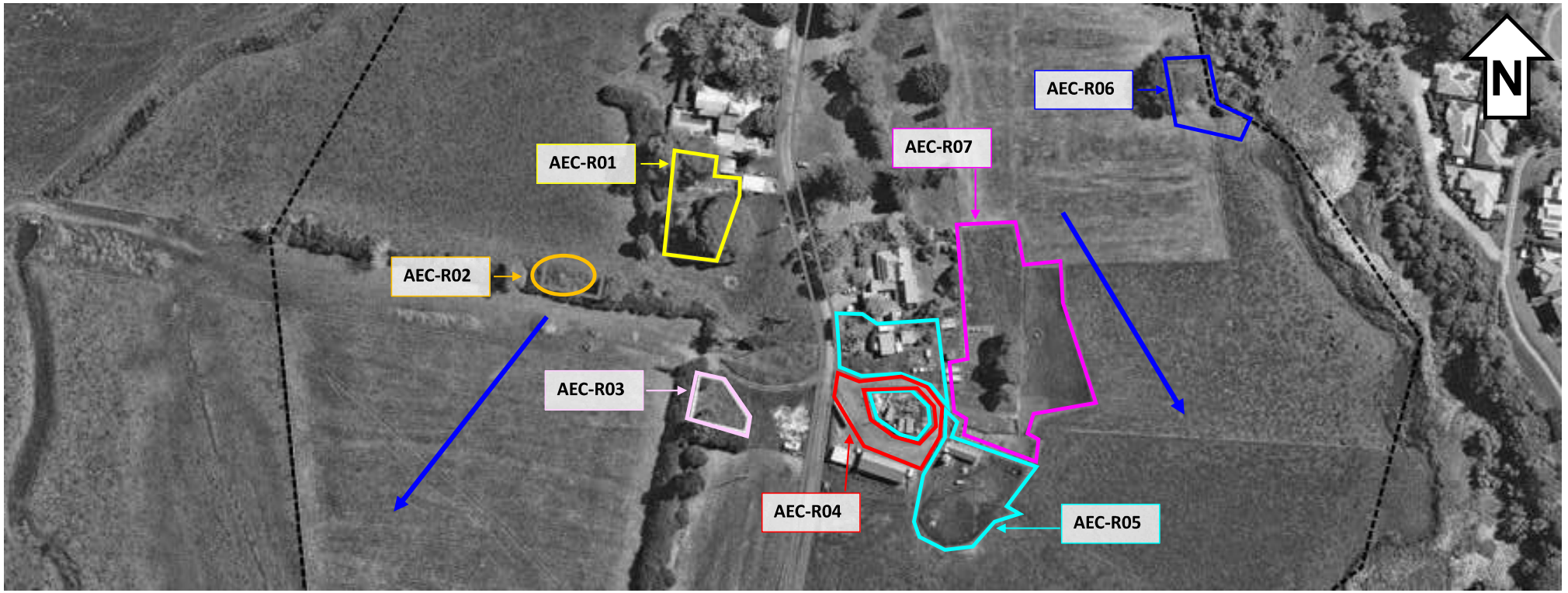
ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

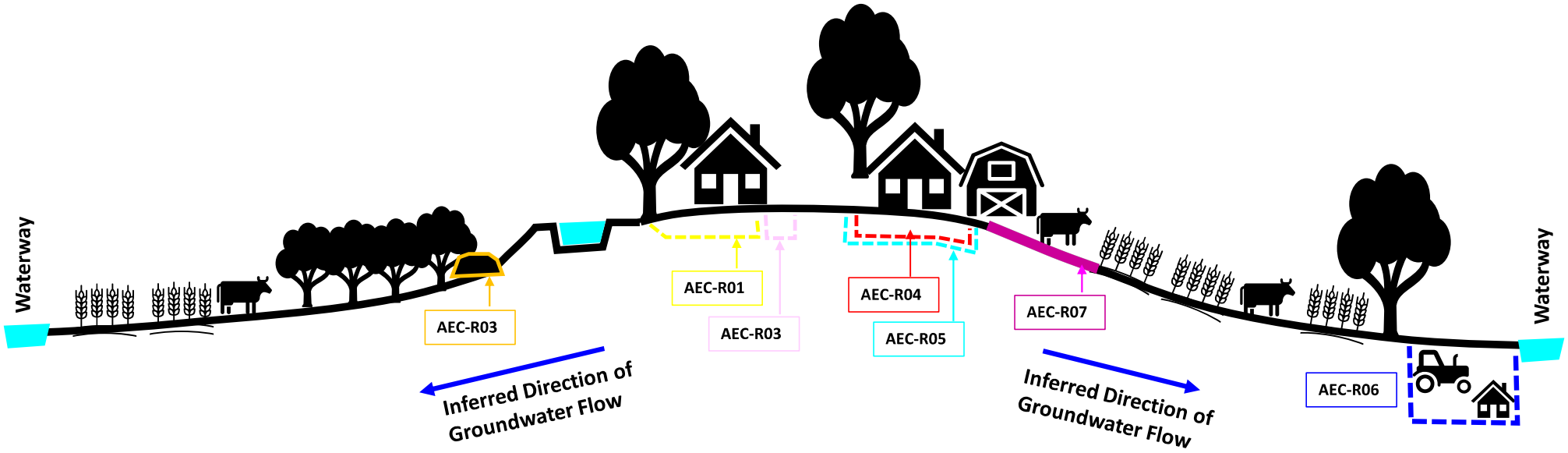
Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	9
Project:	ENRS2069	Source:	Google Earth	Date:	As Reported
Location:	48 Campbell St, Gerringong, NSW.	Scale:	ScaleBar	Title:	DSI Sampling Plan (Asbestos) w/ Exceedances
		Status:	Rev 1		



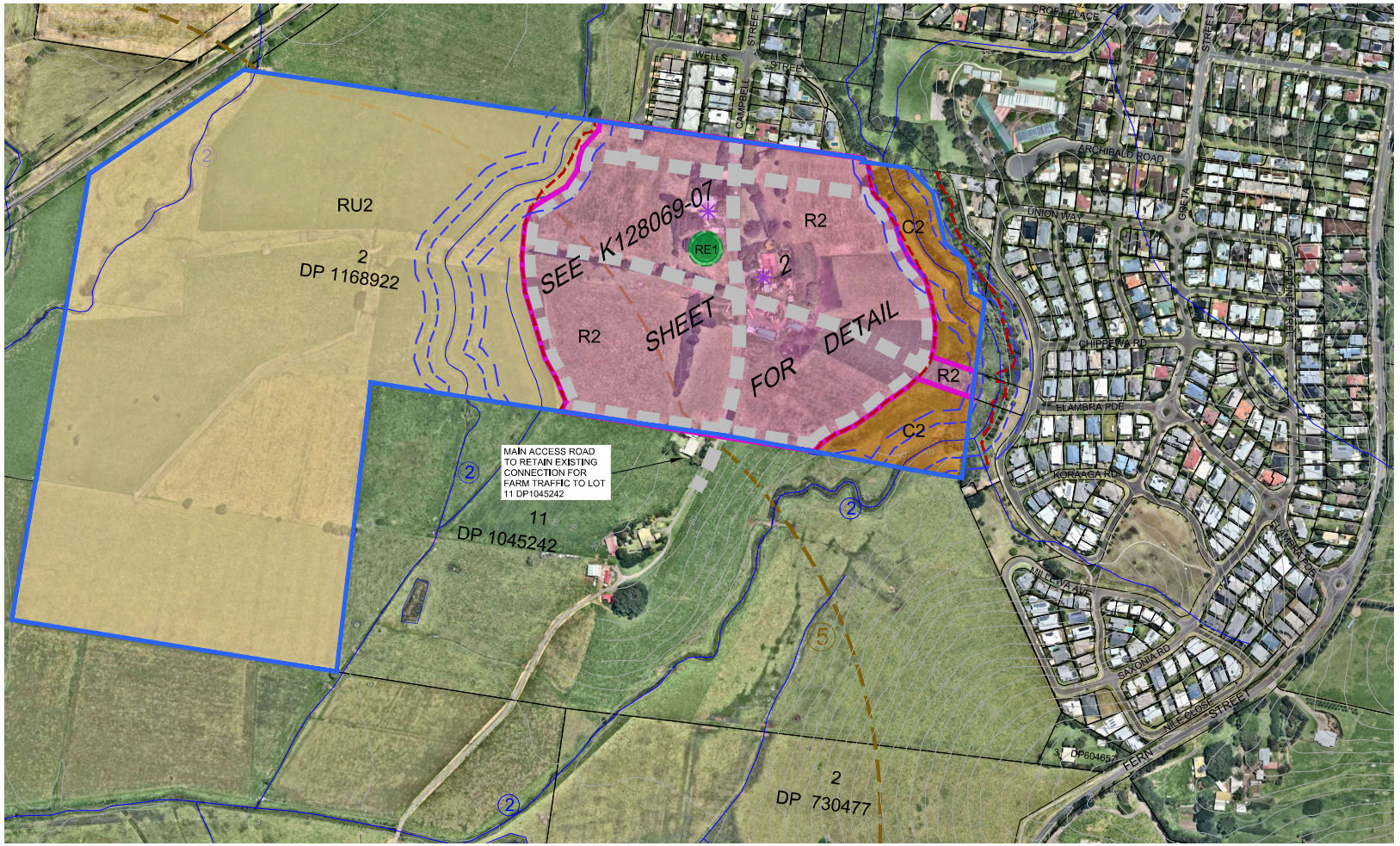
ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	10
Project:	ENRS2069	Source:	NearMaps	Date:	As Reported
Location:	48 Campbell St, Gerringong, NSW.	Scale:	ScaleBar	Title:	Site Plan – Revised Areas of Environmental Concern
		Status:	Rev 1		





ENRS ENVIRONMENT & NATURAL RESOURCE SOLUTIONS	Client:	Allen Price & Scarratts	Drawn:	CA	Figure:	11
	Project:	ENRS2069	Source:	NearMaps	Date:	As Reported
	Location:	48 Campbell St, Gerringong, NSW.	Scale:	NTS	Title:	Site Plan – Revised Conceptual Site Model (CSM)
			Status:	Rev 1		



NOTE:

This plan was prepared for the client as an indicative structure plan to accompany a planning application to Kiama Municipal Council.

The information shown on this plan is not suitable for any other purpose.

The property dimensions, contours and other physical features have been compiled from existing information and have not been verified by field survey.

The dimensions, areas etc shown on this plan are subject to field survey and also to the requirements of Council and any other authority which may have requirements under any relevant legislation.

In particular, no reliance should be placed on the information on this plan for detailed subdivision design or for any financial dealings involving the land.

Allen Price & Scarratts Pty Ltd therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying an application to council for planning purposes and which may be subject to alteration for reasons beyond the control of Allen Price & Scarratts Pty Ltd.

Unless stamped by Council, this plan is not a plan of an approved subdivision.

This note is an integral part of this plan.

PROPOSED DEVELOPMENT AREA

PROPOSED R2 ZONED LAND - 13.91ha

APPROX. YIELD @12 DWELLINGS/ha - 166 DWELLINGS

LEGEND

- EXISTING DWELLING
- PRINCIPAL ROADS (indicative only)
- R2 — LOW DENSITY RESIDENTIAL AREA 13.91ha (incl. Road Reserve)
- C2 — ENVIRONMENTAL CONSERVATION 2.48ha (1.28ha north; 1.20ha south)
- RU2 — RURAL LANDSCAPE 29.43ha
- RE1 — FIG TREE incl. 5M BUFFER 1250m²
- SUBJECT LOT
- INDICATIVE DEVELOPMENT AREA
- WATERCOURSE DERIVED FROM DCDB
- RIPARIAN OFFSET - APPROX 10m CHANNEL +30m EACH SIDE (70m TOTAL)
- RIPARIAN OFFSET - APPROX 10m CHANNEL +15m EACH SIDE (40m TOTAL)
- 2090 1% AEP FLOOD LEVEL

KIAMA LEP MAPPING

- (2) WATERCOURSE CATEGORY
- (5) ACID SULFATE SOILS

NOTE:
CADASTRAL INFORMATION HAS BEEN OBTAINED FROM NSW LAND & PROPERTY INFORMATION (LPI) DIGITAL CADASTRAL DATA BASE (DCDB) AND IS SUBJECT TO SURVEY. IT SHOULD BE VIEWED AS APPROXIMATE ONLY.

CONTOURS ARE AT 2m INTERVALS AND HAVE ALSO BEEN DERIVED FROM DCDB MAPPING.

PROFESSIONAL STANDARDS SCHEME
Liability limited by a scheme approved under Professional Standards Legislation

0 25 50 75 100 150
SCALE:- 1:2500

RATIO: 1:2500 (AT A1 ORIGINAL)

DATUM: AUSTRALIAN HEIGHT DATUM
ORIGIN: DCDB
DATE OF PLAN: 26.10.2020

SURVEY	DCDB	
DESIGN		
DRAWN	DS	
CHECK'D	MJP	

REV	DESCRIPTION	BY	DATE
01	ZONES AMENDED, FLOOD LEVELS ADDED, SECOND SHEET- DEV. AREA - ADDED	DS	16.02.2022

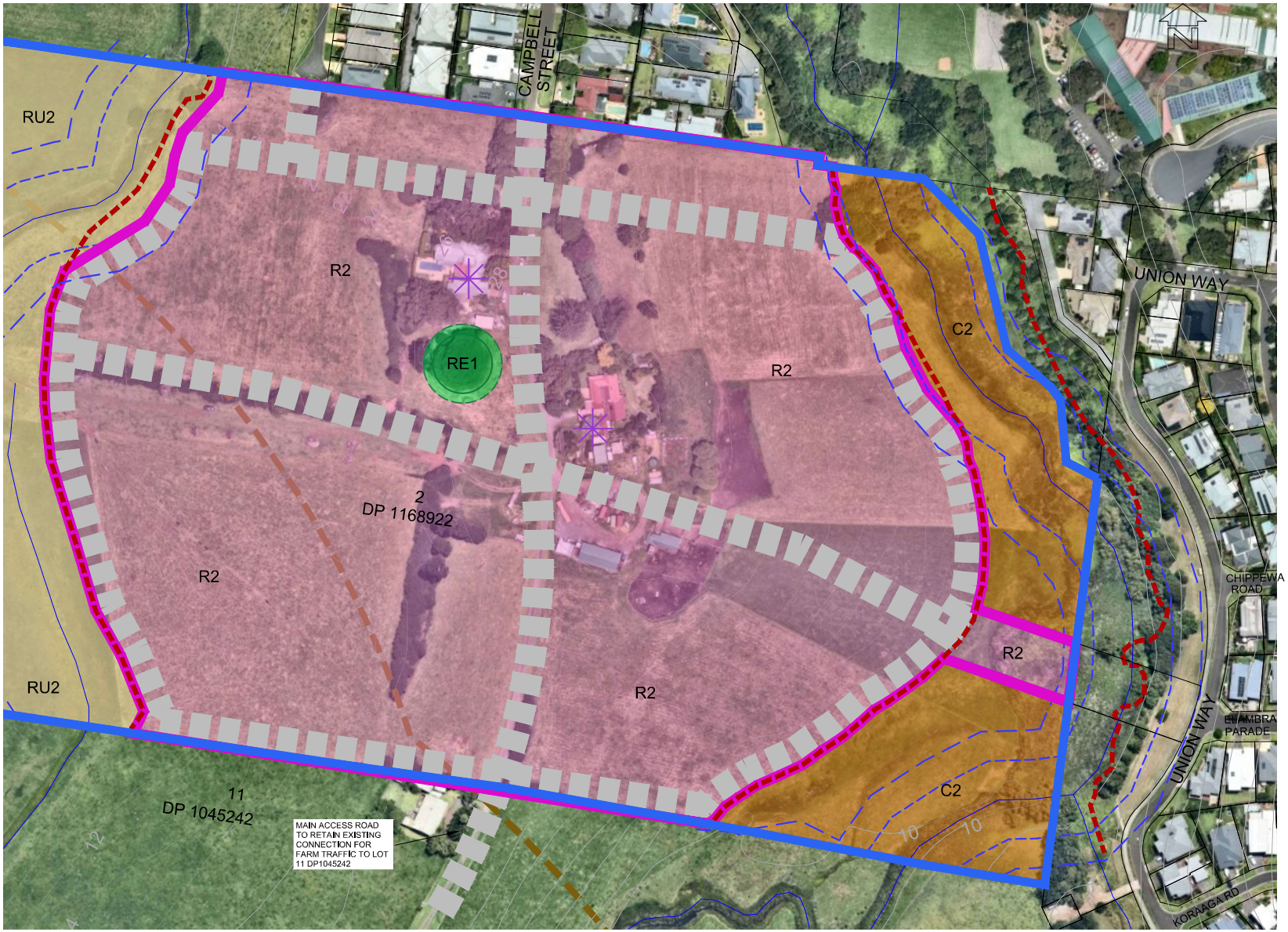
allen price & scarratts pty ltd
land and development consultants
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533
phone:(02) 4421 6544
consultants@allenprice.com.au www.allenprice.com.au

PROPOSED STRUCTURE PLAN
OVER LOT 2 DP 1168922
ELAMBRA WEST URA
CAMPBELL ST GERRINGONG
FOR CAMPBELL

DRAWING STATUS: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DRAWING NUMBER: K128069-07
SHEET 1 OF 2
REVISION 01

K:\CAD Drawings - Projects\K128069 Drawings\K128069-07 ELAMBRA WEST - Lot 2 DP1168922 STRUCTURE PLAN.dwg



NOTE:

This plan was prepared for the client as an indicative structure plan to accompany a planning application to Kiama Municipal Council.

The information shown on this plan is not suitable for any other purpose.

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Unless stamped by Council, this plan is not a plan of an approved subdivision.

This note is an integral part of this plan.

PROPOSED DEVELOPMENT AREA

PROPOSED R2 ZONED LAND - 13.91ha

APPROX. YIELD @12 DWELLINGS/ha - 166 DWELLINGS

LEGEND

- EXISTING DWELLING
- PRINCIPAL ROADS (indicative only)
- R2 — LOW DENSITY RESIDENTIAL AREA 13.91ha (incl. Road Reserve)
- C2 — ENVIRONMENTAL CONSERVATION 2.48ha (1.28ha north; 1.20ha south)
- RU2 — RURAL LANDSCAPE 29.43ha
- RE1 — FIG TREE incl. 5M BUFFER 1250m²
- SUBJECT LOT
- INDICATIVE DEVELOPMENT AREA
- WATERCOURSE DERIVED FROM DCDB
- RIPARIAN OFFSET - APPROX 10m CHANNEL +30m EACH SIDE (70m TOTAL)
- RIPARIAN OFFSET - APPROX 10m CHANNEL +15m EACH SIDE (40m TOTAL)
- 2090 1% AEP FLOOD LEVEL

KIAMA LEP MAPPING

- (2) WATERCOURSE CATEGORY
- (5) ACID SULFATE SOILS

NOTE:
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CONTOURS ARE AT 2m INTERVALS AND HAVE ALSO BEEN DERIVED FROM DCDB MAPPING.

PROFESSIONAL STANDARDS SCHEME
Liability limited by a scheme approved under Professional Standards Legislation

0 10 20 30 40 50
SCALE:- 1:1000

K:\CAD Drawings - Projects\K128069 Drawings\K128069-07 ELAMBRA WEST - Lot 2 DP1168922 STRUCTURE PLAN.dwg

RATIO: 1:1000 (AT A1 ORIGINAL)

DATUM: AUSTRALIAN HEIGHT DATUM
ORIGIN: DCDB
DATE OF PLAN: 26.10.2020

	SURVEY	DCDB
	DESIGN	
	DRAWN	DS
	CHECK'D	MJP

REV	DESCRIPTION	BY	DATE
01	ZONES AMENDED, FLOOD LEVELS ADDED, SECOND SHEET - DEV. AREA - ADDED	DS	16.02.2022

allen price & scarratts pty ltd
land and development consultants
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Kiama Office: 1/28 Bong Bong Street, Kiama NSW 2533
phone:(02) 4421 6544
consultants@allenprice.com.au www.allenprice.com.au

PROPOSED STRUCTURE PLAN
OVER LOT 2 DP 1168922
ELAMBRA WEST URA
CAMPBELL ST GERRINGONG
FOR CAMPBELL

DRAWING STATUS: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DRAWING NUMBER: K128069-07
SHEET 2 OF 2
REVISION 01

APPENDICES

Appendix A

Laboratory Certificates of Analysis (COA) & Chain of Custody (COC) - Soil

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

ALS

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4423 2063 E: nowra@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 4 Day TAT
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WQ/001/21	
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)
COC: (1) 2 3 4 5 6 7
OF: 1 2 3 4 (5) 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? (Yes) No N/A
Free ice / frozen ice bricks present upon receipt? (Yes) No N/A
Random Sample Temperature on Receipt: 9.8 °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 24/11/2021	Michelle. DATE/TIME: 24/11/21	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	SEND TO ENVIROLAB (Combo 3)	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A1/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
2	A4/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
3	A6/TP1-0.1	20/11/2021	Soil	1x Soil Jar				1						
4	A7-8/SP1	10/11/2021	Soil	1x Soil Jar				1						
5	A9/TP1-0.1	10/11/2021	Soil	1x Soil Jar				1						
6	A10/TP1-0.2	10/11/2021	Soil	1x Soil Jar				1						
7	A10/DUP1-0.2	10/11/2021	Soil	1x Soil Jar			1							
	A10/TP1-0.2 T	10/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
8	A10/TP2-0.2	10/11/2021	Soil	1x Soil Jar				1						
9	A11/TP1-0.2	10/11/2021	Soil	1x Soil Jar				1						
10	A11/TP2-0.2	10/11/2021	Soil	1x Soil Jar				1						
11	A12/SP1-1	20/11/2021	Soil	1x Soil Jar				1						
12	A14/TP1-0.1	19/11/2021	Soil	1x Soil Jar				1						
13	A14/TP1-0.6	19/11/2021	Soil	1x Soil Jar	1									
14	A14/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
15	A15/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
16	A15/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
17	A15/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
18	A15/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
				TOTAL	1	1	1	16	0	0	0			

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfur
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

Environmental Division
Wollongong
Work Order Reference
EW2105020

Telephone : 02 42253125

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Ph: 02 4423 2063 E: nowra@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	**ENRS Pty Ltd**	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:	**108 Jerry Bailey Rd Shoalhaven Heads**		☒ Non Standard or urgent TAT (List due date): **4 Day TAT**
PROJECT NO./PO:	**ENRS2069**	ALS QUOTE NO.: **WO/001/21**	COC SEQUENCE NUMBER (Circle) COC: 1 (2) 3 4 5 6 7
SITE/DESCRIPTION:	**48 Campbell St - DSI**	COUNTRY OF ORIGIN:	OF: 1 2 3 4 (5) 6 7
PROJECT MANAGER:	**ENRSLAB**	CONTACT PH: **02 4448 5490 / 0401518443**	
SAMPLER:	**CA**	SAMPLER MOBILE: **0478 725 692**	
COC Emailed to ALS?	**(YES / NO)**	EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		**lab@enrs.com.au**	
Email Invoice to (will default to PM if no other addresses are listed):			

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: **24/11/2021**	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	(Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
19	A15/TP5-0.2	19/11/2021	Soil	1x Soil Jar				1						
20	A15/TP6-0.2	19/11/2021	Soil	1x Soil Jar				1						
21	A16/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
22	A17/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
23	A17SP1-1	20/11/2021	Soil	1x Soil Jar				1						
24	A18/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
25	A18/DUP2-0.2	19/11/2021	Soil	1x Soil Jar			1							
	A18/TP1-0.2 T	19/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
26	A18/TP2-0.4	19/11/2021	Soil	1x Soil Jar				1						
27	A18/TP2-1.4	19/11/2021	Soil	1x Soil Jar	1									
28	A18/TP4-0.6	19/11/2021	Soil	1x Soil Jar				1						
29	A19/TP2-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
30	A19/TP2-0.3	19/11/2021	Soil	1x Soil Jar				1						
31	A19/TP4-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
32	A19/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
33	A19/TP4-0.6	19/11/2021	Soil	1x Soil Jar	1									
34	A20/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
35	A20/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
36	A20/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
				TOTAL	2	1	1	13	0	2	2	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	**ENRS Pty Ltd**	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:	**108 Jerry Bailey Rd Shoalhaven Heads**		☒ Non Standard or urgent TAT (List due date): **4 Day TAT**
PROJECT NO./PO:	**ENRS2069**	ALS QUOTE NO.: **WO/001/21**	COC SEQUENCE NUMBER (Circle)
SITE/DESCRIPTION:	**48 Campbell St - DSI**	COUNTRY OF ORIGIN:	COC: 1 2 (3) 4 5 6 7
PROJECT MANAGER:	**ENRSLAB**	CONTACT PH: **02 4448 5490 / 0401518443**	OF: 1 2 3 4 (5) 6 7
SAMPLER:	**CA**	SAMPLER MOBILE: **0478 725 692**	
COC Emailed to ALS? (**YES** / **NO**)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		**lab@enrs.com.au**	
Email Invoice to (will default to PM if no other addresses are listed):			

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: **24/11/2021**	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-25	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
37	A20/TP3-0.8	19/11/2021	Soil	1x Soil Jar	1									
38	A22/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
39	A23/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
40	A23/DUP3-0.3	20/11/2021	Soil	1x Soil Jar			1							
~~41~~	A23/TP1-0.3 T	20/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
41	A24/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
42	A25/TP1-0.5	20/11/2021	Soil	1x Soil Jar & 1x Pathogens Jar				1		1	1			
43	A25/TP3-0.5	20/11/2021	Soil	1x Soil Jar & 1x Pathogens Jar				1		1	1			
44	A28/TP1-0.1	20/11/2021	Soil	1x Pathogens Jar						1	1			
45	A28/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1				1	1	
46	A28/TP5-0.1	20/11/2021	Soil	1x Pathogens Jar						1	1			
47	A28/TP5-0.3	20/11/2021	Soil	1x Soil Jar				1				1	1	
48	A28/TP5-0.7	20/11/2021	Soil	1x Soil Jar	1									
49	A29/TP1-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
50	A29/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
51	A29/TP2-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
52	A29/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
53	A29/TP2-0.6	19/11/2021	Soil	1x Soil Jar				1						
54	A30/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
				TOTAL	1	1	1	11	0	6	6	2	2	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 4 Day TAT
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WQ/001/21	COC SEQUENCE NUMBER (Circle)
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	COC: 1 2 3 (4) 5 6 7
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	OF: 1 2 3 4 (5) 6 7
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 24/11/2021	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS (MATRIX: Solid(S) Water(W))			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
55	A31/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
56	A32/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
57	A32/DUP4-0.2	20/11/2021	Soil	1x Soil Jar			1							
	A32/TP1-0.2 T	20/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
58	A32/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
59	A32/TP3-0.2	20/11/2021	Soil	1x Soil Jar				1						
60	A32/TP4-0.2	20/11/2021	Soil	1x Soil Jar				1						
61	A32/TP5-0.2	20/11/2021	Soil	1x Soil Jar				1						
62	A32/TP6-0.2	20/11/2021	Soil	1x Soil Jar				1						
63	A32/TP7-0.2		Soil	1x Soil Jar				1						
64	A32/TP8-0.2	10/11/2021	Soil	1x Soil Jar				1						
65	A32/TP9-0.2	10/11/2021	Soil	1x Soil Jar				1						
66	A32/DUP5-0.2	10/11/2021	Soil	1x Soil Jar			1							
	A32/TP9-0.2 T	10/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
67	A34/TP1-0.1	19/11/2021	Soil	1x Soil Jar				1						
68	A34/TP1-0.5	19/11/2021	Soil	1x Soil Jar	1									
69	A34/TP2-0.1	19/11/2021	Soil	1x Soil Jar				1						
70	A34/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
71	A34/TP3-0.8	19/11/2021	Soil	1x Soil Jar	1									
				TOTAL	2	2	2	13	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 4 Day TAT
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WO/001/21	COC SEQUENCE NUMBER (Circle): COC: 1 2 3 4 (5) 6 7
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	OF: 1 2 3 4 (5) 6 7
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 24/11/2021	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
72	A34/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
73	A34/TP4-0.5	19/11/2021	Soil	1x Soil Jar	1									
74	A35/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
75	A35/TP3-0.2	20/11/2021	Soil	1x Soil Jar				1						
77	A36/SP1-1	20/11/2021	Soil	1x Soil Jar				1						
78	A36/SP1-2	20/11/2021	Soil	1x Soil Jar				1						
				TOTAL	0	0	0	5	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EW2105020**	Page	: 1 of 75
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Project	: ENRS2069	Date Samples Received	: 24-Nov-2021 17:00
Order number	: ENRS2069	Date Analysis Commenced	: 26-Nov-2021
C-O-C number	: ----	Issue Date	: 02-Dec-2021 16:40
Sampler	: ----		
Site	: 48 Campbell St - DSI		
Quote number	: WO/001/21		
No. of samples received	: 77		
No. of samples analysed	: 69		

ilac-MRA NATA
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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
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
Uma Nagendiram	Subcontracting Coordinator	WRG Subcontracting, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, 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 Contact 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.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- 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.
- Salmonella: Holding time was not met. Therefore result may be indicative.
- Poor spike recovery forTKN due to matrix interferences(confirmed by re-analysis).
- EG005T: Poor precision was obtained for Lead on sample EW2105020 # 75. Confirmed by redigestion and reanalysis.
- Thermotolerant Coliforms, E.coli and Salmonella analyses for samples 7254204, 7254205, 7254206, 7254207, 7254208, 7254209, 7254210 and 7254211 (EW2105020-029, 031, 042, 043, 044,
- EP075(SIM): LOR raised due to the high amount of moisture present.
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A1/TP1-0.3	A4/TP1-0.3	A6/TP1-0.1	A7-8/SP1	A9/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-001	EW2105020-002	EW2105020-003	EW2105020-004	EW2105020-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	28.0	26.7	32.0	26.9	28.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	8	17
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	13	16	23	32
Copper	7440-50-8	5	mg/kg	169	52	65	92	110
Lead	7439-92-1	5	mg/kg	11	15	32	124	198
Nickel	7440-02-0	2	mg/kg	8	3	9	12	13
Zinc	7440-66-6	5	mg/kg	50	13	68	229	311
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.2	0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A1/TP1-0.3	A4/TP1-0.3	A6/TP1-0.1	A7-8/SP1	A9/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-001	EW2105020-002	EW2105020-003	EW2105020-004	EW2105020-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A1/TP1-0.3	A4/TP1-0.3	A6/TP1-0.1	A7-8/SP1	A9/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-001	EW2105020-002	EW2105020-003	EW2105020-004	EW2105020-005
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	**0.6**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	**0.5**	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	**1.1**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	**140**	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	**160**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	**300**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A1/TP1-0.3	A4/TP1-0.3	A6/TP1-0.1	A7-8/SP1	A9/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-001	EW2105020-002	EW2105020-003	EW2105020-004	EW2105020-005
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	230	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	120	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	350	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	88.6	99.7	74.2	95.7	108
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	76.3	116	74.8	105	101
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	94.8	120	82.5	111	119
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	99.8	95.0	92.4	102	97.7
2-Chlorophenol-D4	93951-73-6	0.5	%	94.6	90.1	84.0	96.1	93.3
2.4.6-Tribromophenol	118-79-6	0.5	%	72.0	68.8	47.9	75.5	70.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	102	97.5	100	103	99.8
Anthracene-d10	1719-06-8	0.5	%	88.8	85.7	87.7	92.0	88.6
4-Terphenyl-d14	1718-51-0	0.5	%	98.0	94.6	96.3	99.5	96.6
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	102	91.2	94.2	97.5	117
Toluene-D8	2037-26-5	0.2	%	114	97.0	102	108	128

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A1/TP1-0.3	A4/TP1-0.3	A6/TP1-0.1	A7-8/SP1	A9/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-001**	**EW2105020-002**	**EW2105020-003**	**EW2105020-004**	**EW2105020-005**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**115**	**103**	**103**	**107**	**127**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A10/TP1-0.2	A10/DUP1-0.2	A10/TP2-0.2	A11/TP1-0.2	A11/TP2-0.2
			Sampling date / time	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-006	EW2105020-007	EW2105020-008	EW2105020-009	EW2105020-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	19.4	20.1	19.6	26.7	23.1
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	7	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	13	10	14	20	18
Copper	7440-50-8	5	mg/kg	82	75	82	81	86
Lead	7439-92-1	5	mg/kg	71	46	119	84	74
Nickel	7440-02-0	2	mg/kg	9	7	9	10	9
Zinc	7440-66-6	5	mg/kg	144	104	148	160	159
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A10/TP1-0.2	A10/DUP1-0.2	A10/TP2-0.2	A11/TP1-0.2	A11/TP2-0.2
			Sampling date / time	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-006	EW2105020-007	EW2105020-008	EW2105020-009	EW2105020-010
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	<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	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A10/TP1-0.2	A10/DUP1-0.2	A10/TP2-0.2	A11/TP1-0.2	A11/TP2-0.2
			Sampling date / time	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-006	EW2105020-007	EW2105020-008	EW2105020-009	EW2105020-010
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	**1.0**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	**2.0**	<0.5	**0.8**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	**0.7**	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	**0.8**	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	**0.8**	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	**0.7**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	**0.5**	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	**6.5**	<0.5	**0.8**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	**0.9**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**1.2**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.5**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	**150**	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	**150**	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A10/TP1-0.2	A10/DUP1-0.2	A10/TP2-0.2	A11/TP1-0.2	A11/TP2-0.2
			Sampling date / time	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-006	EW2105020-007	EW2105020-008	EW2105020-009	EW2105020-010
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	140	<100	200	<100	130
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	140	<50	200	<50	130
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	82.7	----	84.2	98.5	94.8
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	79.6	----	66.5	82.9	94.5
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	96.3	----	92.4	114	104
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	101	101	95.8	99.5	100
2-Chlorophenol-D4	93951-73-6	0.5	%	95.2	95.0	90.8	94.2	95.1
2.4.6-Tribromophenol	118-79-6	0.5	%	72.5	69.2	69.5	71.3	73.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	101	103	98.7	100.0	101
Anthracene-d10	1719-06-8	0.5	%	89.5	91.0	88.2	88.9	91.5
4-Terphenyl-d14	1718-51-0	0.5	%	97.9	100	96.1	97.7	99.8
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	88.5	111	86.2	90.5	96.0
Toluene-D8	2037-26-5	0.2	%	97.8	122	93.3	97.8	103

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A10/TP1-0.2	A10/DUP1-0.2	A10/TP2-0.2	A11/TP1-0.2	A11/TP2-0.2
			Sampling date / time	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-006**	**EW2105020-007**	**EW2105020-008**	**EW2105020-009**	**EW2105020-010**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**101**	**117**	**97.1**	**100**	**106**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A12/SP1-1	A14/TP1-0.1	A14/TP3-0.2	A15/TP1-0.2	A15/TP2-0.2
			Sampling date / time	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-011	EW2105020-012	EW2105020-014	EW2105020-015	EW2105020-016
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.9	26.1	28.0	26.7	31.2
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	11	11	12	6
Cadmium	7440-43-9	1	mg/kg	<1	1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	40	37	23	25
Copper	7440-50-8	5	mg/kg	119	117	119	123	128
Lead	7439-92-1	5	mg/kg	106	77	95	404	105
Nickel	7440-02-0	2	mg/kg	8	19	14	11	16
Zinc	7440-66-6	5	mg/kg	149	550	1200	1410	345
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	<0.1	0.4	0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A12/SP1-1	A14/TP1-0.1	A14/TP3-0.2	A15/TP1-0.2	A15/TP2-0.2
			Sampling date / time	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-011	EW2105020-012	EW2105020-014	EW2105020-015	EW2105020-016
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A12/SP1-1	A14/TP1-0.1	A14/TP3-0.2	A15/TP1-0.2	A15/TP2-0.2
			Sampling date / time	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-011	EW2105020-012	EW2105020-014	EW2105020-015	EW2105020-016
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	0.7	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	0.5	<0.5	1.1	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	0.5	<0.5	0.9	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	1.0	<0.5	3.7	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A12/SP1-1	A14/TP1-0.1	A14/TP3-0.2	A15/TP1-0.2	A15/TP2-0.2
			Sampling date / time	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-011	EW2105020-012	EW2105020-014	EW2105020-015	EW2105020-016
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	**140**	**120**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	**140**	**120**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**97.3**	**85.1**	**90.4**	**97.1**	**88.9**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**90.9**	**80.7**	**84.7**	**92.2**	**87.6**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**113**	**95.6**	**97.1**	**108**	**103**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**97.4**	**100**	**98.5**	**95.8**	**99.4**
2-Chlorophenol-D4	93951-73-6	0.5	%	**92.3**	**95.4**	**92.2**	**90.3**	**93.4**
2.4.6-Tribromophenol	118-79-6	0.5	%	**65.2**	**68.6**	**58.6**	**64.1**	**65.9**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**98.1**	**103**	**101**	**96.9**	**101**
Anthracene-d10	1719-06-8	0.5	%	**87.4**	**90.8**	**89.0**	**86.7**	**91.0**
4-Terphenyl-d14	1718-51-0	0.5	%	**95.6**	**101**	**98.8**	**95.2**	**98.6**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**106**	**109**	**102**	**100**	**128**
Toluene-D8	2037-26-5	0.2	%	**114**	**116**	**108**	**108**	**132**

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A12/SP1-1	A14/TP1-0.1	A14/TP3-0.2	A15/TP1-0.2	A15/TP2-0.2
			Sampling date / time	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-011**	**EW2105020-012**	**EW2105020-014**	**EW2105020-015**	**EW2105020-016**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**117**	**112**	**108**	**105**	**130**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A15/TP3-0.2	A15/TP4-0.2	A15/TP5-0.2	A15/TP6-0.2	A16/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-017	EW2105020-018	EW2105020-019	EW2105020-020	EW2105020-021
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	27.8	26.2	28.8	22.6	37.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	9	10	6	6	<5
Cadmium	7440-43-9	1	mg/kg	2	1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	25	30	28	20	16
Copper	7440-50-8	5	mg/kg	110	178	98	126	105
Lead	7439-92-1	5	mg/kg	262	463	116	141	27
Nickel	7440-02-0	2	mg/kg	19	15	13	12	10
Zinc	7440-66-6	5	mg/kg	977	1060	410	297	204
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	1.0	0.2	0.3	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A15/TP3-0.2	A15/TP4-0.2	A15/TP5-0.2	A15/TP6-0.2	A16/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-017	EW2105020-018	EW2105020-019	EW2105020-020	EW2105020-021
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A15/TP3-0.2	A15/TP4-0.2	A15/TP5-0.2	A15/TP6-0.2	A16/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-017	EW2105020-018	EW2105020-019	EW2105020-020	EW2105020-021
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	**0.7**	<0.5	**0.7**	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	**1.6**	<0.5	**1.5**	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	**1.4**	<0.5	**1.3**	**0.6**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	**0.8**	<0.5	**0.8**	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	**0.7**	<0.5	**0.6**	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	**0.9**	<0.5	**0.8**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	**0.7**	<0.5	**0.6**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	**6.8**	<0.5	**6.3**	**0.6**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	**0.9**	<0.5	**0.8**	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**1.2**	**0.6**	**1.1**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.5**	**1.2**	**1.4**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	**120**	<100	<100	**120**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	**140**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	**120**	<50	<50	**260**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A15/TP3-0.2	A15/TP4-0.2	A15/TP5-0.2	A15/TP6-0.2	A16/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-017	EW2105020-018	EW2105020-019	EW2105020-020	EW2105020-021
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	180	<100	120	200
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	110
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	180	<50	120	310
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	87.4	85.6	83.7	88.8	79.6
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	63.8	86.3	79.0	89.9	77.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	76.6	97.4	92.2	103	98.4
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	95.7	100	96.4	99.3	99.6
2-Chlorophenol-D4	93951-73-6	0.5	%	89.9	94.1	90.9	93.7	93.2
2.4.6-Tribromophenol	118-79-6	0.5	%	61.6	69.0	64.8	64.8	66.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	99.5	102	99.0	102	101
Anthracene-d10	1719-06-8	0.5	%	88.0	90.2	87.4	89.9	90.4
4-Terphenyl-d14	1718-51-0	0.5	%	96.8	100	96.0	99.8	100
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	100	94.4	94.1	96.3	96.4
Toluene-D8	2037-26-5	0.2	%	104	101	100	102	106

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A15/TP3-0.2	A15/TP4-0.2	A15/TP5-0.2	A15/TP6-0.2	A16/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-017**	**EW2105020-018**	**EW2105020-019**	**EW2105020-020**	**EW2105020-021**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**98.9**	**96.0**	**98.7**	**101**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A17/TP1-0.2	A17/SP1-1	A18/TP1-0.2	A18/DUP2-0.2	A18/TP2-0.4
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-022	EW2105020-023	EW2105020-024	EW2105020-025	EW2105020-026
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	27.3	14.6	6.1	4.6	4.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	26	22	<2	<2	<2
Copper	7440-50-8	5	mg/kg	72	10	181	184	294
Lead	7439-92-1	5	mg/kg	29	8	<5	<5	6
Nickel	7440-02-0	2	mg/kg	14	5	5	5	6
Zinc	7440-66-6	5	mg/kg	53	28	38	37	42
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	15.5	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A17/TP1-0.2	A17/SP1-1	A18/TP1-0.2	A18/DUP2-0.2	A18/TP2-0.4
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-022	EW2105020-023	EW2105020-024	EW2105020-025	EW2105020-026
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<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	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A17/TP1-0.2	A17/SP1-1	A18/TP1-0.2	A18/DUP2-0.2	A18/TP2-0.4
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-022	EW2105020-023	EW2105020-024	EW2105020-025	EW2105020-026
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A17/TP1-0.2	A17/SP1-1	A18/TP1-0.2	A18/DUP2-0.2	A18/TP2-0.4
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-022	EW2105020-023	EW2105020-024	EW2105020-025	EW2105020-026
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**86.9**	**90.2**	**82.1**	**----**	**88.0**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**91.6**	**98.4**	**85.5**	**----**	**93.8**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**95.5**	**102**	**89.6**	**----**	**92.8**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**81.9**	**87.1**	**80.2**	**81.5**	**82.7**
2-Chlorophenol-D4	93951-73-6	0.5	%	**81.7**	**84.4**	**79.7**	**80.8**	**82.0**
2.4.6-Tribromophenol	118-79-6	0.5	%	**86.6**	**82.0**	**77.2**	**77.3**	**79.0**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**99.2**	**93.0**	**95.3**	**97.8**	**101**
Anthracene-d10	1719-06-8	0.5	%	**90.9**	**86.9**	**88.8**	**90.4**	**93.0**
4-Terphenyl-d14	1718-51-0	0.5	%	**90.8**	**88.1**	**87.2**	**88.6**	**92.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**97.0**	**122**	**118**	**121**	**114**
Toluene-D8	2037-26-5	0.2	%	**90.4**	**102**	**102**	**107**	**100**

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A17/TP1-0.2	A17/SP1-1	A18/TP1-0.2	A18/DUP2-0.2	A18/TP2-0.4
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-022**	**EW2105020-023**	**EW2105020-024**	**EW2105020-025**	**EW2105020-026**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**76.5**	**89.0**	**88.0**	**91.3**	**85.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A18/TP4-0.6	A19/TP2-0.1	A19/TP2-0.3	A19/TP4-0.1	A19/TP4-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-028	EW2105020-029	EW2105020-030	EW2105020-031	EW2105020-032
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	4.7	----	30.9	----	26.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	15	----	6
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	----	<1
Chromium	7440-47-3	2	mg/kg	<2	----	18	----	24
Copper	7440-50-8	5	mg/kg	185	----	125	----	80
Lead	7439-92-1	5	mg/kg	<5	----	58	----	27
Nickel	7440-02-0	2	mg/kg	5	----	14	----	15
Zinc	7440-66-6	5	mg/kg	36	----	660	----	170
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A18/TP4-0.6	A19/TP2-0.1	A19/TP2-0.3	A19/TP4-0.1	A19/TP4-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-028	EW2105020-029	EW2105020-030	EW2105020-031	EW2105020-032
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<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	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A18/TP4-0.6	A19/TP2-0.1	A19/TP2-0.3	A19/TP4-0.1	A19/TP4-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-028	EW2105020-029	EW2105020-030	EW2105020-031	EW2105020-032
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	**180**	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	**180**	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A18/TP4-0.6	A19/TP2-0.1	A19/TP2-0.3	A19/TP4-0.1	A19/TP4-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-028	EW2105020-029	EW2105020-030	EW2105020-031	EW2105020-032
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	----	210	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	130	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	340	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	<1
MM823: Salmonella (absence / presence)								
Salmonella spp.	----	-	-	----	Not Detected	----	Not Detected	----
MM869: E.coli and Thermotolerant Coliforms by MPN								
ø Faecal Coliforms by MPN	----	10	MPN/g	----	<13	----	>35000	----
ø E.coli by MPN	----	10	MPN/g	----	<13	----	>35000	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	81.9	----	99.5	----	79.2
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	85.9	----	104	----	88.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	88.0	----	106	----	88.6
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	82.5	----	83.6	----	80.8
2-Chlorophenol-D4	93951-73-6	0.5	%	82.1	----	79.9	----	81.0
2.4.6-Tribromophenol	118-79-6	0.5	%	77.6	----	79.4	----	81.5
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	99.1	----	95.2	----	94.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A18/TP4-0.6	A19/TP2-0.1	A19/TP2-0.3	A19/TP4-0.1	A19/TP4-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-028	EW2105020-029	EW2105020-030	EW2105020-031	EW2105020-032
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	**91.6**	**----**	**87.5**	**----**	**87.9**
4-Terphenyl-d14	1718-51-0	0.5	%	**90.4**	**----**	**90.2**	**----**	**87.0**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**113**	**----**	**89.2**	**----**	**121**
Toluene-D8	2037-26-5	0.2	%	**98.1**	**----**	**88.3**	**----**	**132**
4-Bromofluorobenzene	460-00-4	0.2	%	**83.3**	**----**	**78.2**	**----**	**123**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A20/TP1-0.2	A20/TP2-0.2	A20/TP3-0.2	A22/TP1-0.2	A23/TP1-0.3
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-034	EW2105020-035	EW2105020-036	EW2105020-038	EW2105020-039
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	22.7	12.1	28.0	19.4	4.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	<5	5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	27	10	22	14	<2
Copper	7440-50-8	5	mg/kg	111	133	124	158	226
Lead	7439-92-1	5	mg/kg	268	44	101	49	<5
Nickel	7440-02-0	2	mg/kg	12	7	14	9	6
Zinc	7440-66-6	5	mg/kg	446	113	228	147	42
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	0.2	0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A20/TP1-0.2	A20/TP2-0.2	A20/TP3-0.2	A22/TP1-0.2	A23/TP1-0.3
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-034	EW2105020-035	EW2105020-036	EW2105020-038	EW2105020-039
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A20/TP1-0.2	A20/TP2-0.2	A20/TP3-0.2	A22/TP1-0.2	A23/TP1-0.3
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-034	EW2105020-035	EW2105020-036	EW2105020-038	EW2105020-039
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	**130**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**210**	**200**	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**340**	**200**	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A20/TP1-0.2	A20/TP2-0.2	A20/TP3-0.2	A22/TP1-0.2	A23/TP1-0.3
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-034	EW2105020-035	EW2105020-036	EW2105020-038	EW2105020-039
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	290	220	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	130	150	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	420	370	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	96.0	92.0	86.2	102	94.6
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	109	109	86.7	108	97.6
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	102	101	89.4	112	98.9
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	95.7	101	94.4	94.8	85.6
2-Chlorophenol-D4	93951-73-6	0.5	%	86.9	81.9	80.5	84.4	82.8
2.4.6-Tribromophenol	118-79-6	0.5	%	90.1	85.2	80.5	103	71.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	101	91.5	86.7	91.8	101
Anthracene-d10	1719-06-8	0.5	%	94.6	93.2	90.1	92.3	89.2
4-Terphenyl-d14	1718-51-0	0.5	%	93.7	92.5	90.2	89.0	90.0
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	130	120	114	110	123
Toluene-D8	2037-26-5	0.2	%	115	103	101	95.4	108

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A20/TP1-0.2	A20/TP2-0.2	A20/TP3-0.2	A22/TP1-0.2	A23/TP1-0.3
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-034**	**EW2105020-035**	**EW2105020-036**	**EW2105020-038**	**EW2105020-039**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**101**	**87.8**	**87.9**	**82.6**	**95.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A23/DUP3-0.3	A24/TP1-0.2	A25/TP1-0.5	A25/TP3-0.5	A28/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-040	EW2105020-041	EW2105020-042	EW2105020-043	EW2105020-044
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	5.4	26.7	36.0	30.6	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	<2	24	27	22	----
Copper	7440-50-8	5	mg/kg	174	92	71	75	----
Lead	7439-92-1	5	mg/kg	<5	26	27	24	----
Nickel	7440-02-0	2	mg/kg	5	12	9	11	----
Zinc	7440-66-6	5	mg/kg	37	52	56	47	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	<0.1	0.1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A23/DUP3-0.3	A24/TP1-0.2	A25/TP1-0.5	A25/TP3-0.5	A28/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-040	EW2105020-041	EW2105020-042	EW2105020-043	EW2105020-044
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	<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	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	<1	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A23/DUP3-0.3	A24/TP1-0.2	A25/TP1-0.5	A25/TP3-0.5	A28/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-040	EW2105020-041	EW2105020-042	EW2105020-043	EW2105020-044
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	<2	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A23/DUP3-0.3	A24/TP1-0.2	A25/TP1-0.5	A25/TP3-0.5	A28/TP1-0.1
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-040	EW2105020-041	EW2105020-042	EW2105020-043	EW2105020-044
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
MM823: Salmonella (absence / presence)								
Salmonella spp.	----	-	-	----	----	Not Detected	Not Detected	Not Detected
MM869: E.coli and Thermotolerant Coliforms by MPN								
ø Faecal Coliforms by MPN	----	10	MPN/g	----	----	<14	<14	>29000
ø E.coli by MPN	----	10	MPN/g	----	----	<14	<14	>29000
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	98.4	90.4	86.3	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	104	92.6	92.2	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	108	95.6	98.0	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	81.3	83.1	89.0	81.2	----
2-Chlorophenol-D4	93951-73-6	0.5	%	80.6	82.1	83.7	79.6	----
2.4.6-Tribromophenol	118-79-6	0.5	%	80.2	97.3	62.0	80.7	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	96.7	100	94.4	99.7	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	A23/DUP3-0.3	A24/TP1-0.2	A25/TP1-0.5	A25/TP3-0.5	A28/TP1-0.1
				Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit		EW2105020-040	EW2105020-041	EW2105020-042	EW2105020-043	EW2105020-044
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
Anthracene-d10	1719-06-8	0.5	%		**94.4**	**93.4**	**85.6**	**92.4**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**91.9**	**89.9**	**85.3**	**91.8**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**121**	**118**	**110**	**108**	**----**
Toluene-D8	2037-26-5	0.2	%		**104**	**102**	**112**	**90.8**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**89.9**	**85.8**	**83.2**	**77.5**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.6	----	7.9	----	----
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	313	----	826	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	20.0	----	50.8	----	35.6
ED006: Exchangeable Cations on Alkaline Soils								
Exchangeable Calcium	----	0.2	meq/100g	9.3	----	5.6	----	----
Exchangeable Magnesium	----	0.2	meq/100g	2.4	----	11.6	----	----
Exchangeable Potassium	----	0.2	meq/100g	3.1	----	13.7	----	----
Exchangeable Sodium	----	0.2	meq/100g	1.3	----	3.4	----	----
Cation Exchange Capacity	----	0.2	meq/100g	16.1	----	34.4	----	----
Exchangeable Aluminium	----	0.2	meq/100g	<0.2	----	<0.2	----	----
Exchangeable Sodium Percent	----	0.2	%	7.9	----	10.0	----	----
Calcium/Magnesium Ratio	----	0.2	-	3.8	----	0.5	----	----
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	200	----	370	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	100	----	800	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	<5	----	6
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	----	<1
Chromium	7440-47-3	2	mg/kg	8	----	13	----	30
Copper	7440-50-8	5	mg/kg	148	----	69	----	104
Lead	7439-92-1	5	mg/kg	17	----	38	----	46
Nickel	7440-02-0	2	mg/kg	7	----	8	----	19
Zinc	7440-66-6	5	mg/kg	87	----	241	----	118
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	----	<20	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	----	0.1	----	----
EK058G: Nitrate as N by Discrete Analyser								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EK058G: Nitrate as N by Discrete Analyser - Continued								
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg	6.1	----	4.8	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	6.1	----	4.9	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	1370	----	16200	----	----
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	1380	----	16200	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	3020	----	16400	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<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	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<2	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.8	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.8	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**1.0**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.9**	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	**210**	----	<100
C29 - C36 Fraction	----	100	mg/kg	**120**	----	**540**	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**120**	----	**750**	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C16 - C34 Fraction	----	100	mg/kg	120	----	440	----	<100
>C34 - C40 Fraction	----	100	mg/kg	100	----	470	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	220	----	910	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	<1
MM823: Salmonella (absence / presence)								
Salmonella spp.	----	-	-	----	Not Detected	----	Not Detected	----
MM869: E.coli and Thermotolerant Coliforms by MPN								
ø Faecal Coliforms by MPN	----	10	MPN/g	----	>48000	----	>42000	----
ø E.coli by MPN	----	10	MPN/g	----	>48000	----	>42000	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	95.0	----	84.8	----	85.9
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	106	----	92.2	----	87.5
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	101	----	89.1	----	89.4
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	81.2	----	82.0	----	81.9
2-Chlorophenol-D4	93951-73-6	0.5	%	82.7	----	82.0	----	82.4
2.4.6-Tribromophenol	118-79-6	0.5	%	90.0	----	100	----	88.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	100.0	----	100	----	100
Anthracene-d10	1719-06-8	0.5	%	94.0	----	95.3	----	94.0
4-Terphenyl-d14	1718-51-0	0.5	%	108	----	82.9	----	90.5
EP080S: TPH(V)/BTEX Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A28/TP1-0.2	A28/TP5-0.1	A28/TP5-0.3	A29/TP1-0.1	A29/TP1-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-045	EW2105020-046	EW2105020-047	EW2105020-049	EW2105020-050
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	95.6	----	90.3	----	128
Toluene-D8	2037-26-5	0.2	%	87.0	----	89.5	----	110
4-Bromofluorobenzene	460-00-4	0.2	%	76.5	----	79.9	----	94.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A29/TP2-0.1	A29/TP2-0.2	A29/TP2-0.6	A30/TP2-0.2	A31/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-051	EW2105020-052	EW2105020-053	EW2105020-054	EW2105020-055
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	51.1	24.4	25.0	25.5
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	<5	<5	7
Cadmium	7440-43-9	1	mg/kg	----	<1	1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	13	37	25	31
Copper	7440-50-8	5	mg/kg	----	74	90	90	133
Lead	7439-92-1	5	mg/kg	----	39	20	28	241
Nickel	7440-02-0	2	mg/kg	----	9	14	12	17
Zinc	7440-66-6	5	mg/kg	----	319	23	186	331
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	0.1	0.1	0.3
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A29/TP2-0.1	A29/TP2-0.2	A29/TP2-0.6	A30/TP2-0.2	A31/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-051	EW2105020-052	EW2105020-053	EW2105020-054	EW2105020-055
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	<0.05	<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	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<2	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A29/TP2-0.1	A29/TP2-0.2	A29/TP2-0.6	A30/TP2-0.2	A31/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-051	EW2105020-052	EW2105020-053	EW2105020-054	EW2105020-055
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	1.1	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	1.3	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.8	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	2.4	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	1.0	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.9	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	110	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	110	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A29/TP2-0.1	A29/TP2-0.2	A29/TP2-0.6	A30/TP2-0.2	A31/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-051	EW2105020-052	EW2105020-053	EW2105020-054	EW2105020-055
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	----	150	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	150	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	<1	<1
MM823: Salmonella (absence / presence)								
Salmonella spp.	----	-	-	Not Detected	----	----	----	----
MM869: E.coli and Thermotolerant Coliforms by MPN								
ø Faecal Coliforms by MPN	----	10	MPN/g	7800	----	----	----	----
ø E.coli by MPN	----	10	MPN/g	7800	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	84.7	89.4	81.6	92.5
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	72.2	76.5	91.6	91.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	96.6	100.0	97.1	114
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	89.2	93.0	91.4	92.5
2-Chlorophenol-D4	93951-73-6	0.5	%	----	86.2	90.4	88.7	88.7
2.4.6-Tribromophenol	118-79-6	0.5	%	----	62.1	66.0	67.7	65.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	96.2	97.9	98.3	95.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A29/TP2-0.1	A29/TP2-0.2	A29/TP2-0.6	A30/TP2-0.2	A31/TP1-0.2
			Sampling date / time	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	20-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-051	EW2105020-052	EW2105020-053	EW2105020-054	EW2105020-055
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	**84.1**	**86.7**	**82.9**	**74.8**
4-Terphenyl-d14	1718-51-0	0.5	%	----	**91.6**	**94.8**	**93.7**	**88.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	**85.8**	**87.6**	**89.7**	**106**
Toluene-D8	2037-26-5	0.2	%	----	**95.7**	**97.1**	**96.7**	**114**
4-Bromofluorobenzene	460-00-4	0.2	%	----	**89.3**	**86.2**	**84.7**	**104**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP1-0.2	A32/DUP4-0.2	A32/TP2-0.2	A32/TP3-0.2	A32/TP4-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-056	EW2105020-057	EW2105020-058	EW2105020-059	EW2105020-060
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	25.1	25.4	25.7	28.6	27.0
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	33	26	25	27	24
Copper	7440-50-8	5	mg/kg	79	78	84	126	119
Lead	7439-92-1	5	mg/kg	29	27	24	24	25
Nickel	7440-02-0	2	mg/kg	12	13	13	15	15
Zinc	7440-66-6	5	mg/kg	54	50	79	64	73
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	0.1	0.1	0.1	0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP1-0.2	A32/DUP4-0.2	A32/TP2-0.2	A32/TP3-0.2	A32/TP4-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-056	EW2105020-057	EW2105020-058	EW2105020-059	EW2105020-060
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	<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	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP1-0.2	A32/DUP4-0.2	A32/TP2-0.2	A32/TP3-0.2	A32/TP4-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-056	EW2105020-057	EW2105020-058	EW2105020-059	EW2105020-060
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP1-0.2	A32/DUP4-0.2	A32/TP2-0.2	A32/TP3-0.2	A32/TP4-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-056	EW2105020-057	EW2105020-058	EW2105020-059	EW2105020-060
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**126**	**----**	**88.4**	**87.9**	**86.5**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**114**	**----**	**97.1**	**95.6**	**92.4**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**131**	**----**	**105**	**98.9**	**99.0**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**92.3**	**89.0**	**92.7**	**89.1**	**85.6**
2-Chlorophenol-D4	93951-73-6	0.5	%	**88.6**	**86.0**	**89.2**	**85.5**	**82.8**
2.4.6-Tribromophenol	118-79-6	0.5	%	**66.8**	**65.4**	**72.3**	**65.7**	**64.8**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**98.8**	**95.7**	**97.4**	**95.8**	**92.8**
Anthracene-d10	1719-06-8	0.5	%	**84.6**	**82.7**	**84.3**	**83.3**	**81.2**
4-Terphenyl-d14	1718-51-0	0.5	%	**95.3**	**91.5**	**93.3**	**91.8**	**89.7**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**90.3**	**94.1**	**106**	**95.1**	**99.8**
Toluene-D8	2037-26-5	0.2	%	**96.3**	**99.2**	**115**	**103**	**107**

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A32/TP1-0.2	A32/DUP4-0.2	A32/TP2-0.2	A32/TP3-0.2	A32/TP4-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-056**	**EW2105020-057**	**EW2105020-058**	**EW2105020-059**	**EW2105020-060**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**93.9**	**92.0**	**104**	**93.1**	**96.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP5-0.2	A32/TP6/0.2	A32/TP7/0.2	A32/TP8-0.2	A32/TP9-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-061	EW2105020-062	EW2105020-063	EW2105020-064	EW2105020-065
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**28.7**	**28.3**	**25.4**	**25.6**	**32.2**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**23**	**29**	**30**	**28**	**24**
Copper	7440-50-8	5	mg/kg	**71**	**63**	**93**	**60**	**63**
Lead	7439-92-1	5	mg/kg	**20**	**28**	**24**	**18**	**18**
Nickel	7440-02-0	2	mg/kg	**12**	**13**	**14**	**11**	**10**
Zinc	7440-66-6	5	mg/kg	**22**	**32**	**39**	**20**	**32**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	**0.1**	**0.1**	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP5-0.2	A32/TP6/0.2	A32/TP7/0.2	A32/TP8-0.2	A32/TP9-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-061	EW2105020-062	EW2105020-063	EW2105020-064	EW2105020-065
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP5-0.2	A32/TP6/0.2	A32/TP7/0.2	A32/TP8-0.2	A32/TP9-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-061	EW2105020-062	EW2105020-063	EW2105020-064	EW2105020-065
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/TP5-0.2	A32/TP6/0.2	A32/TP7/0.2	A32/TP8-0.2	A32/TP9-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-061	EW2105020-062	EW2105020-063	EW2105020-064	EW2105020-065
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**98.9**	**80.3**	**90.6**	**105**	**74.4**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**103**	**80.3**	**99.6**	**120**	**77.7**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**114**	**84.5**	**94.7**	**126**	**83.4**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**89.6**	**91.1**	**89.7**	**89.4**	**84.2**
2-Chlorophenol-D4	93951-73-6	0.5	%	**87.3**	**87.6**	**86.3**	**91.5**	**85.8**
2.4.6-Tribromophenol	118-79-6	0.5	%	**66.2**	**68.9**	**61.0**	**86.5**	**79.9**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**91.4**	**95.2**	**96.8**	**97.2**	**91.3**
Anthracene-d10	1719-06-8	0.5	%	**79.2**	**82.4**	**83.0**	**95.9**	**90.8**
4-Terphenyl-d14	1718-51-0	0.5	%	**88.2**	**91.9**	**93.0**	**87.5**	**83.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**92.4**	**96.6**	**91.1**	**92.4**	**85.4**
Toluene-D8	2037-26-5	0.2	%	**103**	**102**	**96.2**	**97.0**	**92.2**

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A32/TP5-0.2	A32/TP6/0.2	A32/TP7/0.2	A32/TP8-0.2	A32/TP9-0.2
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	10-Nov-2021 00:00	10-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-061**	**EW2105020-062**	**EW2105020-063**	**EW2105020-064**	**EW2105020-065**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**92.4**	**94.3**	**89.2**	**86.7**	**81.3**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/DUP5-0.2	A34/TP1-0.1	A34/TP2-0.1	A34/TP3-0.2	A34/TP4-0.2
			Sampling date / time	10-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-066	EW2105020-067	EW2105020-069	EW2105020-070	EW2105020-072
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	34.1	3.8	7.2	6.6	5.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	24	4	5	13	<2
Copper	7440-50-8	5	mg/kg	62	262	165	168	319
Lead	7439-92-1	5	mg/kg	18	6	11	19	<5
Nickel	7440-02-0	2	mg/kg	10	7	7	12	5
Zinc	7440-66-6	5	mg/kg	33	47	57	59	38
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/DUP5-0.2	A34/TP1-0.1	A34/TP2-0.1	A34/TP3-0.2	A34/TP4-0.2
			Sampling date / time	10-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-066	EW2105020-067	EW2105020-069	EW2105020-070	EW2105020-072
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	<0.05	<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	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/DUP5-0.2	A34/TP1-0.1	A34/TP2-0.1	A34/TP3-0.2	A34/TP4-0.2
			Sampling date / time	10-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-066	EW2105020-067	EW2105020-069	EW2105020-070	EW2105020-072
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A32/DUP5-0.2	A34/TP1-0.1	A34/TP2-0.1	A34/TP3-0.2	A34/TP4-0.2
			Sampling date / time	10-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	CAS Number	LOR	Unit	EW2105020-066	EW2105020-067	EW2105020-069	EW2105020-070	EW2105020-072
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	78.4	93.6	79.7	93.7
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	84.3	106	92.6	97.2
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	85.4	98.1	92.9	103
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	86.3	94.4	90.9	95.1	91.3
2-Chlorophenol-D4	93951-73-6	0.5	%	87.7	91.7	87.3	90.9	88.6
2.4.6-Tribromophenol	118-79-6	0.5	%	79.4	60.7	60.8	54.6	53.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	92.3	96.7	97.3	93.8	98.0
Anthracene-d10	1719-06-8	0.5	%	91.4	83.1	82.5	80.1	83.4
4-Terphenyl-d14	1718-51-0	0.5	%	84.6	92.8	93.0	89.1	93.5
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	92.4	106	93.0	103	89.7
Toluene-D8	2037-26-5	0.2	%	94.2	112	96.5	110	97.2

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A32/DUP5-0.2	A34/TP1-0.1	A34/TP2-0.1	A34/TP3-0.2	A34/TP4-0.2
			Sampling date / time	10-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00	19-Nov-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-066**	**EW2105020-067**	**EW2105020-069**	**EW2105020-070**	**EW2105020-072**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**85.8**	**98.0**	**87.7**	**97.6**	**89.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A35/TP2-0.2	A35/TP3-0.2	A36/SP1-1	A36/SP1-2	----
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	----
Compound	CAS Number	LOR	Unit	EW2105020-074	EW2105020-075	EW2105020-076	EW2105020-077	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	49.6	40.4	67.8	29.6	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	15	21	14	29	----
Cadmium	7440-43-9	1	mg/kg	11	15	<1	<1	----
Chromium	7440-47-3	2	mg/kg	39	90	23	48	----
Copper	7440-50-8	5	mg/kg	133	119	41	88	----
Lead	7439-92-1	5	mg/kg	186	425	7	30	----
Nickel	7440-02-0	2	mg/kg	31	39	3	12	----
Zinc	7440-66-6	5	mg/kg	1930	13700	104	154	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.3	0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A35/TP2-0.2	A35/TP3-0.2	A36/SP1-1	A36/SP1-2	----
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	----
Compound	CAS Number	LOR	Unit	EW2105020-074	EW2105020-075	EW2105020-076	EW2105020-077	--------
				Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<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	<0.05	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<2	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A35/TP2-0.2	A35/TP3-0.2	A36/SP1-1	A36/SP1-2	----
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	----
Compound	CAS Number	LOR	Unit	EW2105020-074	EW2105020-075	EW2105020-076	EW2105020-077	--------
				Result	Result	Result	Result	----
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.8	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**1.0**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.9**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	**100**	**270**	<100	----
C29 - C36 Fraction	----	100	mg/kg	**110**	<100	**200**	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**110**	**100**	**470**	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A35/TP2-0.2	A35/TP3-0.2	A36/SP1-1	A36/SP1-2	----
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	----
Compound	CAS Number	LOR	Unit	EW2105020-074	EW2105020-075	EW2105020-076	EW2105020-077	--------
				Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	**140**	**160**	**370**	**140**	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	**190**	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**140**	**160**	**560**	**140**	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**94.9**	**77.1**	**88.2**	**76.9**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**92.1**	**81.1**	**87.0**	**82.1**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**101**	**86.5**	**97.4**	**87.2**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**90.1**	**89.4**	**93.9**	**88.8**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**86.4**	**86.5**	**90.4**	**85.4**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**65.1**	**73.3**	**80.3**	**72.6**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**93.9**	**93.7**	**98.1**	**93.0**	----
Anthracene-d10	1719-06-8	0.5	%	**81.1**	**81.9**	**86.6**	**82.7**	----
4-Terphenyl-d14	1718-51-0	0.5	%	**90.3**	**90.0**	**94.7**	**90.4**	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**89.7**	**88.3**	**85.7**	**81.7**	----
Toluene-D8	2037-26-5	0.2	%	**92.9**	**89.0**	**83.4**	**81.4**	----

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A35/TP2-0.2	A35/TP3-0.2	A36/SP1-1	A36/SP1-2	----
			Sampling date / time	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	20-Nov-2021 00:00	----
Compound	*CAS Number*	*LOR*	*Unit*	**EW2105020-074**	**EW2105020-075**	**EW2105020-076**	**EW2105020-077**	--------
				Result	Result	Result	Result	----
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**86.8**	**92.3**	**78.2**	**98.4**	**----**

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	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(SOIL) EP068A: Organochlorine Pesticides (OC)
(SOIL) EP068B: Organophosphorus Pesticides (OP)
(SOIL) EP068T: Organophosphorus Pesticide Surrogate
(SOIL) EP068S: Organochlorine Pesticide Surrogate
(SOIL) EG005(ED093)T: Total Metals by ICP-AES
(SOIL) EA055: Moisture Content (Dried @ 105-110°C)
(SOIL) EP066: Polychlorinated Biphenyls (PCB)
(SOIL) EP066S: PCB Surrogate
(SOIL) EG035T: Total Recoverable Mercury by FIMS
(SOIL) EP080/071: Total Petroleum Hydrocarbons
(SOIL) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions
(SOIL) EP080: BTEXN
(SOIL) EP080S: TPH(V)/BTEX Surrogates
(SOIL) EP075(SIM)B: Polynuclear Aromatic Hydrocarbons
(SOIL) EP075(SIM)A: Phenolic Compounds
(SOIL) EP075(SIM)S: Phenolic Compound Surrogates
(SOIL) EP075(SIM)T: PAH Surrogates
(SOIL) MM823: Salmonella (absence / presence)
(SOIL) ED045G: Chloride by Discrete Analyser
(SOIL) ED040S : Soluble Sulfate by ICPAES
(SOIL) EA010: Conductivity (1:5)
(SOIL) EA002: pH 1:5 (Soils)
(SOIL) EK055: Ammonia as N
(SOIL) EK057G: Nitrite as N by Discrete Analyser
(SOIL) EK058G: Nitrate as N by Discrete Analyser
(SOIL) EK062: Total Nitrogen as N (TKN + NOx)
(SOIL) EK061G: Total Kjeldahl Nitrogen By Discrete Analyser
(SOIL) EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser
(SOIL) EK067G: Total Phosphorus as P by Discrete Analyser
(SOIL) MM869: E.coli and Thermotolerant Coliforms by MPN
(SOIL) ED006: Exchangeable Cations on Alkaline Soils

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

ALS

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WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 4 Day TAT
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads	ALS QUOTE NO.: WQ/001/21	COC SEQUENCE NUMBER (Circle) COC: (1) 2 3 4 5 6 7 OF: 1 2 3 4 (5) 6 7
PROJECT NO./PO:	ENRS2089	COUNTRY OF ORIGIN:	FOR LABORATORY USE ONLY (Circle)
SITE/DESCRIPTION:	48 Campbell St - DSI		Custody Seal Intact? (Yes) No N/A
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	Free ice / frozen ice bricks present upon receipt? (Yes) No N/A
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	Random Sample Temperature on Receipt: 9.8 °C
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	Other comment:
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 24/11/2021	Michelle DATE/TIME: 24/11/21	DATE/TIME:	DATE/TIME: 29/11/21 800

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	SEND TO ENVIROLAB (Combo 3)	S-35 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM604 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC for analysis etc.
1	A1/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
2	A4/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
3	A6/TP1-0.1	20/11/2021	Soil	1x Soil Jar				1						
4	A7-8/SP1	10/11/2021	Soil	1x Soil Jar				1						
5	A9/TP1-0.1	10/11/2021	Soil	1x Soil Jar				1						
6	A10/TP1-0.2	10/11/2021	Soil	1x Soil Jar				1						
(11) 7	A10/DUP1-0.2	10/11/2021	Soil	1x Soil Jar			1							
	A10/TP1-0.2 T	10/11/2021	Soil	1x Soil Jar		1								
8	A10/TP2-0.2	10/11/2021	Soil	1x Soil Jar				1						
9	A11/TP1-0.2	10/11/2021	Soil	1x Soil Jar				1						
10	A11/TP2-0.2	10/11/2021	Soil	1x Soil Jar				1						
11	A12/SP1-1	20/11/2021	Soil	1x Soil Jar				1						
12	A14/TP1-0.1	19/11/2021	Soil	1x Soil Jar				1						
13	A14/TP1-0.6	19/11/2021	Soil	1x Soil Jar	1									
14	A14/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
15	A15/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
16	A15/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
17	A15/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
18	A15/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
				TOTAL	1	1	1	16	0	0	0			

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfu Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

ENVIROLAB GROUP
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 184092 29/11/21 800

Date Received:
Time Received:
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Please send to Envirolab

Environmental Division
Wollongong
Work Order Reference
EW2105020

Telephone : 02 42983126

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	**ENRS Pty Ltd**	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): **4 Day TAT**
OFFICE:	**108 Jerry Bailey Rd Shoalhaven Heads**		
PROJECT NO./PO:	**ENRS2089**	ALS QUOTE NO.: **WO/001/21**	
SITE/DESCRIPTION:	**48 Campbell St - DSI**	COUNTRY OF ORIGIN:	
PROJECT MANAGER:	**ENRSLAB**	CONTACT PH: **02 4448 5490 / 0401518443**	
SAMPLER:	**CA**	SAMPLER MOBILE: **0478 725 692**	
COC Emailed to ALS?	**(YES / NO)**	EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		**lab@enrs.com.au**	
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)
COC: 1 (2) 3 4 5 6 7
OF: 1 2 3 4 (5) 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: **24/11/2021**	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	HOLD	ENVIROLAB Combo 3	S-25 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
19	A15/TP5-0.2	19/11/2021	Soil	1x Soil Jar				1						
20	A15/TP6-0.2	19/11/2021	Soil	1x Soil Jar				1						
21	A16/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
22	A17/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
23	A17SP1-1	20/11/2021	Soil	1x Soil Jar				1						
24	A18/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
(25)	A18/DUP2-0.2	19/11/2021	Soil	1x Soil Jar			1							
(7)	A18/TP1-0.2 T	19/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
26	A18/TP2-0.4	19/11/2021	Soil	1x Soil Jar				1						
27	A18/TP2-1.4	19/11/2021	Soil	1x Soil Jar	1									
28	A18/TP4-0.6	19/11/2021	Soil	1x Soil Jar				1						
29	A19/TP2-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
30	A19/TP2-0.3	19/11/2021	Soil	1x Soil Jar				1						
31	A19/TP4-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
32	A19/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
33	A19/TP4-0.6	19/11/2021	Soil	1x Soil Jar	1									
34	A20/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
35	A20/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
36	A20/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
				TOTAL	2	1	1	13	0	2	2	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

284012

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

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Ph: 02 4423 2063 E: nowra@alsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 4 Day TAT
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		
PROJECT NO./PO:	ENRS2089	ALS QUOTE NO.: WO/001/21	
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 882	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:			

COC SEQUENCE NUMBER (Circle)
COC: 1 2 (3) 4 5 6 7
CF: 1 2 3 4 (5) 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 24/11/2021	DATE/TIME:	DATE/TIME:	DATE/TIME:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 6HM, PAHs	S-18 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
37	A20/TP3-0.8	19/11/2021	Soil	1x Soil Jar	1									
38	A22/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
39	A23/TP1-0.3	20/11/2021	Soil	1x Soil Jar				1						
40	A23/DUP3-0.3	20/11/2021	Soil	1x Soil Jar			1							
3 ~~41~~	A23/TP1-0.3 T	20/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
41	A24/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
42	A25/TP1-0.5	20/11/2021	Soil	1x Soil Jar & 1x Pathogens Jar				1		1	1			
43	A25/TP3-0.5	20/11/2021	Soil	1x Soil Jar & 1x Pathogens Jar				1		1	1			
44	A28/TP1-0.1	20/11/2021	Soil	1x Pathogens Jar						1	1			
45	A28/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1				1	1	
46	A28/TP5-0.1	20/11/2021	Soil	1x Pathogens Jar						1	1			
47	A28/TP5-0.3	20/11/2021	Soil	1x Soil Jar				1				1	1	
48	A28/TP5-0.7	20/11/2021	Soil	1x Soil Jar	1									
49	A29/TP1-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
50	A29/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
51	A29/TP2-0.1	19/11/2021	Soil	1x Pathogens Jar						1	1			
52	A29/TP2-0.2	19/11/2021	Soil	1x Soil Jar				1						
53	A29/TP2-0.6	19/11/2021	Soil	1x Soil Jar				1						
54	A30/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
				TOTAL	1	1	1	11	0	6	6	2	2	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

284012

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

ALS

SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4423 2063 E: nowra@alsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	109 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 4 Day TAT	Custody Seal Intact?	Yes No N/A
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WQ/001/21	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	COC: 1 2 3 (4) 5 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	OF: 1 2 3 4 (5) 6 7	Other comment:	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):			
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	DATE/TIME: 24/11/2021	DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS (MATRIX: Solid(S) Water(W))			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	ENVIROLAB Combo 3	S-25 - TRH, BTEX, BHM, PAHs	S-19 (TRH, BTEX, BHM, PAHs, Phenols, OC/OPP, PCB)		MM604 (E.Coli, Faecal Coliforms)	MM623 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
55	A31/TP1-0.2	19/11/2021	Soil	1x Soil Jar				1						
56	A32/TP1-0.2	20/11/2021	Soil	1x Soil Jar				1						
57	A32/DUP4-0.2	20/11/2021	Soil	1x Soil Jar			1							
(4)	A32/TP1-0.2 T	20/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
58	A32/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
59	A32/TP3-0.2	20/11/2021	Soil	1x Soil Jar				1						
60	A32/TP4-0.2	20/11/2021	Soil	1x Soil Jar				1						
61	A32/TP5-0.2	20/11/2021	Soil	1x Soil Jar				1						
62	A32/TP6-0.2	20/11/2021	Soil	1x Soil Jar				1						
63	A32/TP7-0.2		Soil	1x Soil Jar				1						
64	A32/TP8-0.2	10/11/2021	Soil	1x Soil Jar				1						
65	A32/TP9-0.2	10/11/2021	Soil	1x Soil Jar				1						
66	A32/DUP5-0.2	10/11/2021	Soil	1x Soil Jar			1							
(5)	A32/TP9-0.2 T	10/11/2021	Soil	1x Soil Jar		1								Please send to Envirolab
67	A34/TP1-0.1	19/11/2021	Soil	1x Soil Jar				1						
68	A34/TP1-0.5	19/11/2021	Soil	1x Soil Jar	1									
69	A34/TP2-0.1	19/11/2021	Soil	1x Soil Jar				1						
70	A34/TP3-0.2	19/11/2021	Soil	1x Soil Jar				1						
71	A34/TP3-0.8	19/11/2021	Soil	1x Soil Jar	1									
				TOTAL	2	2	2	13	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 4 Day TAT	Custody Seal Intact?	Yes / No / N/A
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WQ/001/21	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt?	Yes / No / N/A
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	COC: 1 2 3 4 (5) 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	OF: 1 2 3 4 (5) 6 7	Other comment:	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):			
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	DATE/TIME: 24/11/2021	DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):					
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:					

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	ENVIROLAB Combo 3	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-23	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
72	A34/TP4-0.2	19/11/2021	Soil	1x Soil Jar				1						
73	A34/TP4-0.5	19/11/2021	Soil	1x Soil Jar	1									
74	A35/TP2-0.2	20/11/2021	Soil	1x Soil Jar				1						
75	A35/TP3-0.2	20/11/2021	Soil	1x Soil Jar				1						
77	A36/SP1-1	20/11/2021	Soil	1x Soil Jar				1						
78	A36/SP1-2	20/11/2021	Soil	1x Soil Jar				1						
				TOTAL	0	0	0	5	0	0	0	0	0	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

284012

Envirolab Services Pty Ltd
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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 284012

Client Details

Client	ENRS
Attention	Chris Allen
Address	25 River Rd, Shoalhaven Heads, NSW, 2535

Sample Details

Your Reference	**ENRS2069, 48 Campbell St - DSI**
Number of Samples	5 Soil
Date samples received	29/11/2021
Date completed instructions received	29/11/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	06/12/2021
Date of Issue	02/12/2021

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Results Approved By
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Manju Dewendrage, Prep Team Leader

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		284012-1	284012-2	284012-3	284012-4	284012-5
Your Reference	UNITS	A10/TP1-0.2T	A18/TP1-0.2T	A23/TP1-0.3T	A32/TP1-0.2T	A32/TP9-0.2T
Date Sampled		10/11/2021	19/11/2021	20/11/2021	20/11/2021	10/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Date analysed	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	106	108	110	104	96

svTRH (C10-C40) in Soil						
Our Reference		284012-1	284012-2	284012-3	284012-4	284012-5
Your Reference	UNITS	A10/TP1-0.2T	A18/TP1-0.2T	A23/TP1-0.3T	A32/TP1-0.2T	A32/TP9-0.2T
Date Sampled		10/11/2021	19/11/2021	20/11/2021	20/11/2021	10/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Date analysed	-	01/12/2021	01/12/2021	01/12/2021	01/12/2021	01/12/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	73	81	77	81

PAHs in Soil						
Our Reference		284012-1	284012-2	284012-3	284012-4	284012-5
Your Reference	UNITS	A10/TP1-0.2T	A18/TP1-0.2T	A23/TP1-0.3T	A32/TP1-0.2T	A32/TP9-0.2T
Date Sampled		10/11/2021	19/11/2021	20/11/2021	20/11/2021	10/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Date analysed	-	01/12/2021	01/12/2021	01/12/2021	01/12/2021	01/12/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Pyrene	mg/kg	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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.08	<0.05	<0.05	0.07	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.3	<0.05	<0.05	0.4	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	98	91	99	105	100

Acid Extractable metals in soil						
Our Reference		284012-1	284012-2	284012-3	284012-4	284012-5
Your Reference	UNITS	A10/TP1-0.2T	A18/TP1-0.2T	A23/TP1-0.3T	A32/TP1-0.2T	A32/TP9-0.2T
Date Sampled		10/11/2021	19/11/2021	20/11/2021	20/11/2021	10/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Date analysed	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	1	1	19	18
Copper	mg/kg	76	150	180	60	49
Lead	mg/kg	59	6	5	20	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	4	4	8	6
Zinc	mg/kg	120	29	26	37	23

Moisture						
Our Reference		284012-1	284012-2	284012-3	284012-4	284012-5
Your Reference	UNITS	A10/TP1-0.2T	A18/TP1-0.2T	A23/TP1-0.3T	A32/TP1-0.2T	A32/TP9-0.2T
Date Sampled		10/11/2021	19/11/2021	20/11/2021	20/11/2021	10/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Date analysed	-	1/12/2021	1/12/2021	1/12/2021	1/12/2021	1/12/2021
Moisture	%	19	5.0	4.1	20	21

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			30/11/2021	[NT]	[NT]	[NT]	[NT]	30/11/2021	[NT]
Date analysed	-			30/11/2021	[NT]	[NT]	[NT]	[NT]	30/11/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	101	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	94	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	101	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	104	[NT]	[NT]	[NT]	[NT]	114	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	284012-2
Date extracted	-			30/11/2021	1	30/11/2021	30/11/2021		30/11/2021	30/11/2021
Date analysed	-			01/12/2021	1	01/12/2021	01/12/2021		01/12/2021	01/12/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	116	75
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	130	82
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	127	100
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	116	75
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	130	82
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	127	100
Surrogate o-Terphenyl	%		Org-020	86	1	78	74	5	90	74

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			30/11/2021	[NT]	[NT]	[NT]	[NT]	30/11/2021	[NT]
Date analysed	-			01/12/2021	[NT]	[NT]	[NT]	[NT]	01/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	118	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	95	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			30/11/2021	[NT]	[NT]	[NT]	[NT]	30/11/2021	[NT]
Date analysed	-			30/11/2021	[NT]	[NT]	[NT]	[NT]	30/11/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

TAT

Chain of Custody

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

ALS

SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4423 2063 E: nowra@alsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 17/12/2021
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WOX001/21	
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5480 / 0401518443	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)
COC: (1) 2 3 4 5 6 7
OF: (1) 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 14/12/2021	DATE/TIME:	DATE/TIME:	DATE/TIME: 14/12/21 7pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	SEND TO ENVIROLAB (Combo 3)	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM804 (E.Coli, Faecal Coliforms)	MM823 (Salmonella)	AG-2	NT-2S	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A13/TP2-0.2	14/12/2021	Soil	1x Soil Jar				1						
2	A17/TP3-0.3	14/12/2021	Soil	1x Soil Jar				1						
3	A17/TP3-0.7	14/12/2021	Soil	1x Soil Jar				1						
4	A35/TP5-0.2	14/12/2021	Soil	1x Soil Jar				1						
5	A35/Dup6-0.2	14/12/2021	Soil	1x Soil Jar			1							
6	A35/TP5-0.2 T	14/12/2021	Soil	1x Soil Jar		1								Please send to Envirolab
				TOTAL	0	1	1	4					0	

Environmental Division
Sydney
Work Order Reference
ES2145700

Telephone : +61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CERTIFICATE OF ANALYSIS

Work Order	: **ES2145700**	Page	: 1 of 8
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Project	: ENRS2069	Date Samples Received	: 14-Dec-2021 19:00
Order number	: ----	Date Analysis Commenced	: 15-Dec-2021
C-O-C number	: ----	Issue Date	: 17-Dec-2021 16:56
Sampler	: CA		
Site	: 48 Campbell st - DSI		
Quote number	: EN/222		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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 Contact 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A13/TP2-0.2	A17/TP3-0.3	A17/TP3-0.7	A35/TP5-0.2	A35/Dup6-0.2
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00
Compound	CAS Number	LOR	Unit	ES2145700-001	ES2145700-002	ES2145700-003	ES2145700-004	ES2145700-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	30.2	33.0	27.6	37.7	40.0
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	9	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	3	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	23	24	34	16	16
Copper	7440-50-8	5	mg/kg	89	183	65	94	97
Lead	7439-92-1	5	mg/kg	39	630	22	16	23
Nickel	7440-02-0	2	mg/kg	12	17	15	11	11
Zinc	7440-66-6	5	mg/kg	143	2930	50	76	128
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	0.6	<0.1	0.1	0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A13/TP2-0.2	A17/TP3-0.3	A17/TP3-0.7	A35/TP5-0.2	A35/Dup6-0.2
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00
Compound	CAS Number	LOR	Unit	ES2145700-001	ES2145700-002	ES2145700-003	ES2145700-004	ES2145700-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<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	<0.05	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A13/TP2-0.2	A17/TP3-0.3	A17/TP3-0.7	A35/TP5-0.2	A35/Dup6-0.2
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00
Compound	CAS Number	LOR	Unit	ES2145700-001	ES2145700-002	ES2145700-003	ES2145700-004	ES2145700-005
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A13/TP2-0.2	A17/TP3-0.3	A17/TP3-0.7	A35/TP5-0.2	A35/Dup6-0.2
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00
Compound	CAS Number	LOR	Unit	ES2145700-001	ES2145700-002	ES2145700-003	ES2145700-004	ES2145700-005
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	119	118	127	121	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	133	126	129	135	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	120	113	130	118	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	90.6	84.8	87.5	88.8	83.2
2-Chlorophenol-D4	93951-73-6	0.5	%	105	101	99.9	97.1	98.2
2.4.6-Tribromophenol	118-79-6	0.5	%	108	102	101	99.4	92.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	111	110	110	106	106
Anthracene-d10	1719-06-8	0.5	%	104	102	102	99.1	102
4-Terphenyl-d14	1718-51-0	0.5	%	109	104	104	103	97.7
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	110	94.4	89.1	80.0	87.4
Toluene-D8	2037-26-5	0.2	%	113	95.9	96.3	85.4	86.4

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	A13/TP2-0.2	A17/TP3-0.3	A17/TP3-0.7	A35/TP5-0.2	A35/Dup6-0.2
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00
Compound	*CAS Number*	*LOR*	*Unit*	**ES2145700-001**	**ES2145700-002**	**ES2145700-003**	**ES2145700-004**	**ES2145700-005**
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**106**	**87.2**	**96.5**	**88.9**	**99.5**

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	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

TAT

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

ALS

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4423-2063 E: nowra@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 17/12/2021	Custody Seal Intact?	Yes No N/A
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WO/001/21	COC SEQUENCE NUMBER (Circle)	Free Ice / frozen ice bricks present upon receipt?	Yes No N/A
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	COC: (1) 2 3 4 5 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5460 / 0401518443	OF: (1) 2 3 4 5 6 7	Other comment:	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY: Christine	RELINQUISHED BY:
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	DATE/TIME: 14/12/2021	DATE/TIME: 15/12/21 1600	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au			RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed):					DATE/TIME: 14/12/21 7pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	SEND TO ENVIROLAB (Combo 3)	S-26 - TRH, BTEX, 8HM, PAHs	S-19 (TRH, BTEX, 8HM, PAHs, Phenols, OC/OPP, PCB)		MM604 (E.Coli, Faecal Coliforms)	MM923 (Salmonella)	AG-2	NT-28	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A13/TP2-0.2	14/12/2021	Soil	1x Soil Jar				1						
2	A17/TP3-0.3	14/12/2021	Soil	1x Soil Jar				1						
3	A17/TP3-0.7	14/12/2021	Soil	1x Soil Jar				1						
4	A35/TP5-0.2	14/12/2021	Soil	1x Soil Jar				1						
5	A35/Dup6-0.2	14/12/2021	Soil	1x Soil Jar			1							
6	A35/TP5-0.2 T	14/12/2021	Soil	1x Soil Jar		1								Please send to Envirolab
				TOTAL	0	1	1	4						

Environmental Division
Sydney
Work Order Reference
ES2145700

Telephone : + 61-2-8784 8555

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 285485
Date Received: 15/12/21
Time Received: 1600
Received by: CH
Temp: Cool/Ambient 16°
Cooling: Ice/Icepack
Security: Intact/Broken/None

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 285485

Client Details

Client	ENRS
Attention	Lab Results
Address	25 River Rd, Shoalhaven Heads, NSW, 2535

Sample Details

Your Reference	**ENRS2088, 48 Campbell St DSI**
Number of Samples	1 Soil
Date samples received	15/12/2021
Date completed instructions received	15/12/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	17/12/2021
Date of Issue	17/12/2021

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		285485-1
Your Reference	UNITS	A35/TP5-0.2T
Date Sampled		14/12/2021
Type of sample		Soil
Date extracted	-	16/12/2021
Date analysed	-	16/12/2021
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	83

svTRH (C10-C40) in Soil		
Our Reference		285485-1
Your Reference	UNITS	A35/TP5-0.2T
Date Sampled		14/12/2021
Type of sample		Soil
Date extracted	-	16/12/2021
Date analysed	-	17/12/2021
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	79

PAHs in Soil		
Our Reference		285485-1
Your Reference	UNITS	A35/TP5-0.2T
Date Sampled		14/12/2021
Type of sample		Soil
Date extracted	-	16/12/2021
Date analysed	-	17/12/2021
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	96

Acid Extractable metals in soil		
Our Reference		285485-1
Your Reference	UNITS	A35/TP5-0.2T
Date Sampled		14/12/2021
Type of sample		Soil
Date prepared	-	16/12/2021
Date analysed	-	17/12/2021
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	15
Copper	mg/kg	110
Lead	mg/kg	15
Mercury	mg/kg	0.2
Nickel	mg/kg	9
Zinc	mg/kg	52

Moisture		
Our Reference	UNITS	285485-1
Your Reference		A35/TP5-0.2T
Date Sampled		14/12/2021
Type of sample		Soil
Date prepared	-	16/12/2021
Date analysed	-	17/12/2021
Moisture	%	34

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
Date analysed	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	93	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	98	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	94	[NT]	[NT]	[NT]	[NT]	110	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
Date analysed	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate o-Terphenyl	%		Org-020	82	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
Date analysed	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	77	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	100	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	98	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			16/12/2021	[NT]	[NT]	[NT]	[NT]	16/12/2021	[NT]
Date analysed	-			17/12/2021	[NT]	[NT]	[NT]	[NT]	17/12/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	102	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	101	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com
☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com
☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com
☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com
☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com
☐ Perth: 10 Hod Way, Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsenviro.com
☐ Launceston: 27 Wellington St, Launceston TAS 7250 Ph: 03 6331 2158 E: launceston@alsenviro.com

CLIENT: ENRS	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: 107 Jerry Bailey Rd, Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 21/1/22	Custody Seal Intact? Yes No N/A
PROJECT: ENRS2069 - A33 Soils	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: ENRS2069		OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 2.0 °C
PROJECT MANAGER: CA	CONTACT PH:		Other comments:
SAMPLER: CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES (NO)	EDD FORMAT (or default):	DATE/TIME: 18/1/22	DATE/TIME: 18/1/22 1700
Email Reports to (will default to PM if no other addresses are listed):	lab@enrs.com.au	RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed):	accounts@enrs.com.au	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES		S-19	S-26					Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A33/TP1 -0.2	18/1/22	Soil	1x jar	1		1						
2	A33/TP2 -0.3				1		1						
3	A33/TP3 -0.3				1		1						
4	A33/Dup				1			1					
	A33/Trip				1			1					SEND TO ENVIROLAB PLEASE.
				TOTAL	5		3	2					

Environmental Division Wollongong
Work Order Reference
EW2200245

Telephone : 02 42253125

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; S = Sulfuric Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EW2200245**	Page	: 1 of 8
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Project	: ENRS2069 - A33 Soils	Date Samples Received	: 19-Jan-2022 11:08
Order number	: ENRS2069	Date Analysis Commenced	: 19-Jan-2022
C-O-C number	: ----	Issue Date	: 24-Jan-2022 14:39
Sampler	: Client -CA		
Site	: ----		
Quote number	: WO/001/21		
No. of samples received	: 4		
No. of samples analysed	: 4		

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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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 Contact 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.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A33/TP1-0.2	A33/TP2-0.3	A33/TP3-0.3	A33/Dup	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200245-001	EW2200245-002	EW2200245-003	EW2200245-004	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	9.7	6.3	10.8	9.8	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	4	4	8	11	----
Copper	7440-50-8	5	mg/kg	209	205	217	206	----
Lead	7439-92-1	5	mg/kg	10	10	9	8	----
Nickel	7440-02-0	2	mg/kg	8	7	8	8	----
Zinc	7440-66-6	5	mg/kg	62	55	61	64	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A33/TP1-0.2	A33/TP2-0.3	A33/TP3-0.3	A33/Dup	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200245-001	EW2200245-002	EW2200245-003	EW2200245-004	--------
				Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<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	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	A33/TP1-0.2	A33/TP2-0.3	A33/TP3-0.3	A33/Dup	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200245-001	EW2200245-002	EW2200245-003	EW2200245-004	--------
				Result	Result	Result	Result	----
EP075(SIM)A: Phenolic Compounds - Continued								
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	A33/TP1-0.2	A33/TP2-0.3	A33/TP3-0.3	A33/Dup	----
				Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit		EW2200245-001	EW2200245-002	EW2200245-003	EW2200245-004	--------
					Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		120	108	126	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		113	113	118	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		105	95.0	141	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		98.6	96.9	98.8	100	----
2-Chlorophenol-D4	93951-73-6	0.5	%		106	105	106	106	----
2.4.6-Tribromophenol	118-79-6	0.5	%		107	103	103	103	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		114	113	113	115	----
Anthracene-d10	1719-06-8	0.5	%		107	105	105	107	----
4-Terphenyl-d14	1718-51-0	0.5	%		111	108	108	110	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		87.1	86.1	89.9	86.4	----
Toluene-D8	2037-26-5	0.2	%		85.2	87.8	91.3	84.6	----

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)			Sample ID	**A33/TP1-0.2**	**A33/TP2-0.3**	**A33/TP3-0.3**	**A33/Dup**	**----**
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	*CAS Number*	*LOR*	*Unit*	**EW2200245-001**	**EW2200245-002**	**EW2200245-003**	**EW2200245-004**	**--------**
				Result	Result	Result	Result	----
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	**89.6**	**89.4**	**90.3**	**90.4**	**----**

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	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(SOIL) EP068A: Organochlorine Pesticides (OC)
(SOIL) EP068B: Organophosphorus Pesticides (OP)
(SOIL) EP068T: Organophosphorus Pesticide Surrogate
(SOIL) EP068S: Organochlorine Pesticide Surrogate
(SOIL) EG005(ED093)T: Total Metals by ICP-AES
(SOIL) EA055: Moisture Content (Dried @ 105-110°C)
(SOIL) EP066: Polychlorinated Biphenyls (PCB)
(SOIL) EP066S: PCB Surrogate
(SOIL) EG035T: Total Recoverable Mercury by FIMS
(SOIL) EP080/071: Total Petroleum Hydrocarbons
(SOIL) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions
(SOIL) EP080: BTEXN
(SOIL) EP080S: TPH(V)/BTEX Surrogates
(SOIL) EP075(SIM)B: Polynuclear Aromatic Hydrocarbons
(SOIL) EP075(SIM)A: Phenolic Compounds
(SOIL) EP075(SIM)S: Phenolic Compound Surrogates
(SOIL) EP075(SIM)T: PAH Surrogates

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com
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☐ Launceston: 27 Wellington St, Launceston TAS 7250 Ph: 03 6331 2158 E: launceston@alsenviro.com

CLIENT: ENRS	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 21/1/22	FOR LABORATORY USE ONLY (Circle): Custody Seal Intact? YES NO N/A; Free ice/ frozen ice bricks present upon receipt? YES NO N/A; Random Sample Temperature on Receipt: 20.1 °C; Quick comment:
OFFICE: 108 Jerry Bailey Rd, Shoalhaven Heads			
PROJECT: ENRS2069 - ASS Soils	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	
ORDER NUMBER: ENRS2069			
PROJECT MANAGER: CA	CONTACT PH:		
SAMPLER: CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME: 18/1/22	DATE/TIME: 18/1/22 1700
Email Reports to (will default to PM if no other addresses are listed):		RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed): accounts@enrs.com.au		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).					Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES		S-19	S-26			Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A33/TP1 - 0.2	18/1/22	Soil	1x jar	1		1				
2	A33/TP2 - 0.5	↓	↓	↓	1		1				
3	A33/TP3 - 0.5				1		1				
4	A33/Dup				1			1			
(1)	A33/Trip				1			1			SEND TO ENVIROLAB PLEASE.
				TOTAL	5		3	2			

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 286983
Date Received: 20/1/22
Time Received: 1550
Received By: AG
Temp: Cool/Ambient
Cooling: Icepack 15°
Security: Intact/Broken/None

Environmental Division
Wollongong
Work Order Reference
EW2200245

Telephone : 02 42253125

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; S = Sodium Thiosulfate Preserved Amber Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 286983

Client Details

Client	ENRS
Attention	Chris Allen
Address	25 River Rd, Shoalhaven Heads, NSW, 2535

Sample Details

Your Reference	**ENRS2069**
Number of Samples	1 Soil
Date samples received	20/01/2022
Date completed instructions received	20/01/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	21/01/2022
Date of Issue	21/01/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Hannah Nguyen, Metals Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		286983-1
Your Reference	UNITS	A33/Trip
Date Sampled		18/01/2022
Type of sample		Soil
Date extracted	-	20/01/2022
Date analysed	-	20/01/2022
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	99

svTRH (C10-C40) in Soil		
Our Reference		286983-1
Your Reference	UNITS	A33/Trip
Date Sampled		18/01/2022
Type of sample		Soil
Date extracted	-	20/01/2022
Date analysed	-	21/01/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	89

PAHs in Soil		
Our Reference		286983-1
Your Reference	UNITS	A33/Trip
Date Sampled		18/01/2022
Type of sample		Soil
Date extracted	-	20/01/2022
Date analysed	-	20/01/2022
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	95

Acid Extractable metals in soil		
Our Reference	UNITS	286983-1
Your Reference		A33/Trip
Date Sampled		18/01/2022
Type of sample		Soil
Date prepared	-	21/01/2022
Date analysed	-	21/01/2022
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	7
Copper	mg/kg	190
Lead	mg/kg	6
Mercury	mg/kg	<0.1
Nickel	mg/kg	6
Zinc	mg/kg	38

Moisture		
Our Reference	UNITS	286983-1
Your Reference		A33/Trip
Date Sampled		18/01/2022
Type of sample		Soil
Date prepared	-	20/01/2022
Date analysed	-	21/01/2022
Moisture	%	9.9

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
Date analysed	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	92	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	112	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	81	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
Date analysed	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	109	[NT]
Surrogate o-Terphenyl	%		Org-020	92	[NT]	[NT]	[NT]	[NT]	110	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
Date analysed	-			20/01/2022	[NT]	[NT]	[NT]	[NT]	20/01/2022	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	67	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	114	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	103	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			21/01/2022	[NT]	[NT]	[NT]	[NT]	21/01/2022	[NT]
Date analysed	-			21/01/2022	[NT]	[NT]	[NT]	[NT]	21/01/2022	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Appendix B

Laboratory Certificates of Analysis (COA) & Chain of Custody (COC) – Asbestos

ASET97608/100788/1-29

CHAIN OF CUSTODY - ENRS

ENRS
Environment & Natural Resource Solutions

Consultant:	ENRS	**ENRS Project Name/Number:**	ENRS2069	**Lab:**	ASET (Aust. Safer Env. & Technology)
Project Mgr:	Rohan Last (0401 518 443)	**Site Location/Address:**	Elembra West ASB ID		PO Box 1644
Sampler:	CA	**PO No.:**	ENRS2069		Hornsby Westfield NSW 1635
Address:	108 Jerry Bailey Rd, Shoalhaven Heads, NSW, 2535	**Lab Services Quote No. :**	-	**Phone:**	02 9987 2183
Delivery:	o'night express	**Date results required:**	23/11/2021	**E-mail:**	INFO@AUSSET.COM.AU
Email:	lab@enrs.com.au	**Or choose:**	standard / 1 day / 2 day / 3 day	**Contact:**	Mahen & Amalka
Phone:	02 4448 5490	*Note: Inform lab in advance if urgent turnaround is required*	*surcharge applies*		

Sample information				Tests Required										Comments
Lab Sample ID	ENRS Sample ID	Date sampled	Type of sample	HOLD	Asbestos in Soil/Dust (NEPM W/W%)	Asbestos in Material	Asbestos Fibre Count	Asbestos in Water	asbestos w/w%	SMF	No Analysis required - dispose of sample			sample description
1	A13-F1	20/11/2021	Material			1								URGENT
2	A13-F2	20/11/2021	Material			1								
3	A14/TP3-F1	19/11/2021	Material			1								
4	A15/TP1-F1	19/11/2021	Material			1								
5	A15/TP2-F2	19/11/2021	Material			1								
6	A15/TP3-F3	19/11/2021	Material			1								
7	A15/TP4-F4	19/11/2021	Material			1								
8	A15/TP5-F5	19/11/2021	Material			1								
9	A15/TP6-F6	19/11/2021	Material			1								
10	A17/SP1-F1	20/11/2021	Material			1								
11	A17/TP1-F2	20/11/2021	Material			1								
12	A18/TP1-F1	19/11/2021	Material			1								
13	A19/TP1-F1	19/11/2021	Material			1								
14	A19/TP2-F2	19/11/2021	Material			1								
15	A19/TP4-F3	19/11/2021	Material			1								
16	A20/TP2-F1	19/11/2021	Material			1								
17	A22/TP1-F1	20/11/2021	Material			1								
18	A24-TP1-F1	20/11/2021	Material			1								
19	A28-F1	20/11/2021	Material			1								
20	A29/TP1-F1	20/11/2021	Material			1								
21	A29/TP2-F2	20/11/2021	Material			1								
22	A31/TP1-F1	19/11/2021	Material			1								
23	A34/TP1-F1	19/11/2021	Material			1								
24	A34/TP2-F2	19/11/2021	Material			1								
25	A34/TP3-F3	19/11/2021	Material			1								
26	A34/TP4-F4	19/11/2021	Material			1								
27	A35/TP3-F1	20/11/2021	Material			1								
28	A35/TP3-F2	20/11/2021	Material			1								
29	A36/SP1-F1	20/11/2021	Material			1								
			Total		0	29	0	0	0	0	0			

RECEIVED
24 NOV 2021
BY:

Relinquished by (company):	ENRS	**Received by (company):**	ASET	Samples Received: Cool or Ambient (circle one)
Print Name:	Chris Allen	**Print Name:**		Temperature Recieved at: (if applicable)
Date & Time:	22/11/2021	**Date & Time:**	24/11/21 12.30pm	Transported by: Hand delivered / courier
Signature:		**Signature:**		Page No: 1 of 1

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET97608 / 100788 / 1 – 15
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

25 November 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of fifteen samples out of twenty nine samples, forwarded by Environment & Natural Resource Solutions on 24 November 2021, for analysis for asbestos.

1.Introduction: Fifteen samples out of twenty nine samples forwarded were examined and analysed for the presence of asbestos on 24 and 25 November 2021.

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).**

3. Results :

Sample No. 1. ASET97608 / 100788 / 1. ENRS2069 - A13-F1.
Approx dimensions 6.5 cm x 4.0 cm x 0.6 cm
The sample consisted of a fragment of plaster cement like material.
No asbestos detected.

Sample No. 2. ASET97608 / 100788 / 2. ENRS2069 - A13-F2.
Approx dimensions 6.0 cm x 4.5 cm x 0.5 cm
The sample consisted of a fragment of plaster cement like material.
No asbestos detected.

Sample No. 3. ASET97608 / 100788 / 3. ENRS2069 - A14/TP3-F1.
Approx dimensions 3.2 cm x 3.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 4. ASET97608 / 100788 / 4. ENRS2069 - A15/TP1-F1.
Approx dimensions 5.8 cm x 3.5 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 5. ASET97608 / 100788 / 5. ENRS2069 - A15/TP2-F2.
Approx dimensions 5.5 cm x 3.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 6. ASET97608 / 100788 / 6. ENRS2069 - A15/TP3-F3.
Approx dimensions 8.0 cm x 6.5 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 7. ASET97608 / 100788 / 7. ENRS2069 - A15/TP4-F4.
Approx dimensions 7.5 cm x 6.5 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Crocidolite asbestos detected.

Sample No. 8. ASET97608 / 100788 / 8. ENRS2069 - A15/TP5-F5.
Approx dimensions 6.7 cm x 5.3 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 9. ASET97608 / 100788 / 9. ENRS2069 - A15/TP6-F6.
Approx dimensions 6.0 cm x 4.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos, Amosite asbestos and Crocidolite asbestos detected.

Sample No. 10. ASET97608 / 100788 / 10. ENRS2069 - A17/SP1-F1.
Approx dimensions 5.0 cm x 3.2 cm x 0.6 cm
The sample consisted of a fragment of plaster cement like material.
No asbestos detected.

Sample No. 11. ASET97608 / 100788 / 11. ENRS2069 - A17/TP1-F2.
Approx dimensions 11.7 cm x 11.5 cm x 1.8 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 12. ASET97608 / 100788 / 12. ENRS2069 - A18/TP1-F1.
Approx dimensions 3.5 cm x 3.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 13. ASET97608 / 100788 / 13. ENRS2069 - A19/TP1-F1.
Approx dimensions 5.7 cm x 3.1 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 14. ASET97608 / 100788 / 14. ENRS2069 - A19/TP2-F2.
Approx dimensions 4.2 cm x 2.5 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 15. ASET97608 / 100788 / 15. ENRS2069 - A19/TP4-F3.
Approx dimensions 4.2 cm x 2.2 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Crocidolite asbestos detected.

Reported by,



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.

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.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET97608 / 100788 / 16 - 29
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

25 November 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of fourteen samples out of twenty nine samples, forwarded by Environment & Natural Resource Solutions on 24 November 2021, for analysis for asbestos.

1.Introduction: Fourteen samples out of twenty nine samples forwarded were examined and analysed for the presence of asbestos on 24 and 25 November 2021.

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).**

3. Results :

Sample No. 16. ASET97608 / 100788 / 16. ENRS2069 - A20/TP2-F1.
Approx dimensions 2.6 cm x 2.0 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Sample No. 17. ASET97608 / 100788 / 17. ENRS2069 - A22/TP1-F1.
Approx dimensions 3.7 cm x 2.9 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos, Amosite asbestos and Crocidolite asbestos detected.

Sample No. 18. ASET97608 / 100788 / 18. ENRS2069 - A24-TP1-F1.
Approx dimensions 11.6 cm x 6.7 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 19. ASET97608 / 100788 / 19. ENRS2069 - A28-F1.
Approx dimensions 2.0 cm x 1.7 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos, Amosite asbestos and Crocidolite asbestos detected.

Sample No. 20. ASET97608 / 100788 / 20. ENRS2069 - A29/TP1-F1.
Approx dimensions 3.0 cm x 1.4 cm x 0.3 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 21. ASET97608 / 100788 / 21. ENRS2069 - A29/TP2-F2.
Approx dimensions 2.5 cm x 2.1 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Crocidolite asbestos detected.

Sample No. 22. ASET97608 / 100788 / 22. ENRS2069 - A31/TP1-F1.
Approx dimensions 4.0 cm x 3.8 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 23. ASET97608 / 100788 / 23. ENRS2069 - A34/TP1-F1.
Approx dimensions 1.9 cm x 1.7 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 24. ASET97608 / 100788 / 24. ENRS2069 - A34/TP2-F2.
Approx dimensions 1.8 cm x 1.6 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 25. ASET97608 / 100788 / 25. ENRS2069 - A34/TP3-F3.
Approx dimensions 2.1 cm x 1.6 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 26. ASET97608 / 100788 / 26. ENRS2069 - A34/TP4-F4.
Approx dimensions 3.1 cm x 1.6 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 27. ASET97608 / 100788 / 27. ENRS2069 - A35/TP3-F1.
Approx dimensions 9.5 cm x 7.2 cm x 0.4 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 28. ASET97608 / 100788 / 28. ENRS2069 - A35/TP3-F2.
Approx dimensions 2.7 cm x 2.5 cm x 0.3 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos and Amosite asbestos detected.

Sample No. 29. ASET97608 / 100788 / 29. ENRS2069 - A36/SP1-F1.
Approx dimensions 7.0 cm x 5.0 cm x 0.5 cm
The sample consisted of a fragment of a fibro plaster cement material containing organic fibres.
No asbestos detected.

Reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

NATA
WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.

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.

ASET97607/100787/1-43

CHAIN OF CUSTODY - ENRS

ENRS
Environment & Natural Resource Solutions

Consultant:	ENRS	ENRS Project Name/Number:	ENRS2069
Project Mgr:	Rohan Last (0401 518 443)	Site Location/Address:	Elembra West ASB ID
Sampler:	CA	PO No.:	ENRS2069
Address:	108 Jerry Bailey Rd, Shoalhaven Heads, NSW, 2535	Lab Services Quote No. :	-
Delivery:	o'night express	Date results required:	23/11/2021
Email:	lab@enrs.com.au	Or choose: standard / 1 day / 2 day / 3 day	
Phone:	02 4448 5490	*Note: Inform lab in advance if urgent turnaround is required - surcharge applies*	

Lab: ASET
(Aust. Safer Env. & Technology)
PO Box 1644
Hornsby Westfield NSW 1635
Phone: 02 9987 2183
E-mail: INFO@AUSSET.COM.AU
Contact: Mahen & Amalka

Sample information				Tests Required										Comments
Lab Sample ID	ENRS Sample ID	Date sampled	Type of sample	HOLD	Asbestos in Soil/Dust (NEPM W/W%)	Asbestos in Material	Asbestos Fibre Count	Asbestos in Water	asbestos w/w%	SMF	No Analysis required - dispose of sample			sample description
1	A1/TP1-0.3	20/11/2021	Soil		1									URGENT
2	A4/TP1-0.3	20/11/2021	Soil		1									
3	A6/TP1-0.1	20/11/2021	Soil		1									
4	A7-8/SP1	10/11/2021	Soil		1									
5	A10/TP-0.2	10/11/2021	Soil		1									
6	A10/TP2-0.2	10/11/2021	Soil		1									
7	A11/TP1-0.2	10/11/2021	Soil		1									
8	A11/TP2-0.2	10/11/2021	Soil		1									
9	A12/SP1-1	20/11/2021	Soil		1									
10	A14/TP1-0.1	19/11/2021	Soil		1									
11	A14/TP2-0.2	19/11/2021	Soil		1									
12	A15/TP1-0.2	19/11/2021	Soil		1									
13	A15/TP2-0.2	19/11/2021	Soil		1									
14	A15/TP3-0.2	19/11/2021	Soil		1									
15	A15/TP4-0.2	19/11/2021	Soil		1									
16	A15/TP5-0.2	19/11/2021	Soil		1									
17	A15/TP6-0.2	19/11/2021	Soil		1									
18	A16/TP1-0.1	20/11/2021	Soil		1									
19	A17/SP1-1	20/11/2021	Soil		1									
20	A17/TP1-0.2	20/11/2021	Soil		1									
21	A18/TP1-0.2	19/11/2021	Soil		1									
22	A18/TP2-0.4	19/11/2021	Soil		1									
23	A18/TP4-0.6	19/11/2021	Soil		1									
24	A19/TP2-0.3	19/11/2021	Soil		1									
25	A19/TP4-0.1	19/11/2021	Soil		1									
26	A20/TP1-0.2	19/11/2021	Soil		1									
27	A20/TP2-0.2	19/11/2021	Soil		1									
28	A20/TP3-0.2	19/11/2021	Soil		1									
29	A22/TP1-0.1	20/11/2021	Soil		1									
30	A23/TP1-0.3	20/11/2021	Soil		1									
31	A24/TP1-0.2	20/11/2021	Soil		1									
32	A25/TP3-0.5	20/11/2021	Soil		1									
33	A29/TP1-0.1	19/11/2021	Soil		1									
34	A29/TP2/0.1	19/11/2021	Soil		1									
35	A30/TP2-0.2	20/11/2021	Soil		1									
36	A31/TP1-0.2	19/11/2021	Soil		1									
37	A34/TP1-0.1	19/11/2021	Soil		1									
38	A34/TP2-0.1	19/11/2021	Soil		1									
39	A34/TP3-0.2	19/11/2021	Soil		1									
40	A34/TP4-0.2	19/11/2021	Soil		1									
41	A36/SP1-1	20/11/2021	Soil		1									
42	A36/SP1-2	20/11/2021	Soil		1									
43	A25/TP1 0.5	20/11/21	u		1									
			Total		43	0	0	0	0	0	0			

RECEIVED
24 NOV 2021
BY:

Relinquished by (company):	ENRS	Received by (company):	ASET
Print Name:	Chris Allen	Print Name:	
Date & Time:	22/11/2021	Date & Time:	24/11/21 12.30pm
Signature:		Signature:	

Samples Received: Cool or Ambient (circle one)
Temperature Recieved at: (if applicable)
Transported by: Hand delivered / courier

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET97607 / 100787 / 1 – 20
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

25 November 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of twenty samples out of forty three samples, forwarded by Environment & Natural Resource Solutions on 24 November 2021, for analysis for asbestos.

1.Introduction: Twenty samples out of forty three samples forwarded were examined and analysed for the presence of asbestos on 25 November 2021.

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 WA/ NEPM Guidelines.

3. Results :

Ω Sample No. 1. ASET97607 / 100787 / 1. ENRS2069 - A1/TP1-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 4.4 cm
Approximate total dry weight of soil = 391.0g.
The sample consisted of a mixture of sandy soil, mastic like material, sandstones, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET97607 / 100787 / 2. ENRS2069 - A4/TP1-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 433.0g.
The sample consisted of a mixture of clayish sandy soil, stones, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 3. ASET97607 / 100787 / 3. ENRS2069 - A6/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 539.0g.
The sample consisted of a mixture of sandy soil, organic fibres, stones and plant matter.
No asbestos detected.

Ω Sample No. 4. ASET97607 / 100787 / 4. ENRS2069 - A7-8/SP1.
Approx dimensions 10.0 cm x 10.0 cm x 4.1 cm
Approximate total dry weight of soil = 307.0g.
The sample consisted of a mixture of clayish sandy soil, stones, plaster cement, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 5. ASET97607 / 100787 / 5. ENRS2069 - A10/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 415.0g.
The sample consisted of a mixture of clayish sandy soil, wood chips, sandstones, organic fibres, timber char, stones and plant matter.
No asbestos detected.

Sample No. 6. ASET97607 / 100787 / 6. ENRS2069 - A10/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 405.0g.
The sample consisted of a mixture of clayish sandy soil, wood chips, sandstones, organic fibres, timber char, stones and plant matter.
No asbestos detected.

Sample No. 7. ASET97607 / 100787 / 7. ENRS2069 - A11/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 502.0g.
The sample consisted of a mixture of clayish sandy soil, sandstones, organic fibres, wood chips, timber char, stones and plant matter.
No asbestos detected.

Sample No. 8. ASET97607 / 100787 / 8. ENRS2069 - A11/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 483.0g.
The sample consisted of a mixture of clayish sandy soil, wood chips, mastic like material, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 9. ASET97607 / 100787 / 9. ENRS2069 - A12/SP1-1.
Approx dimensions 10.0 cm x 10.0 cm x 5.1 cm
Approximate total dry weight of soil = 596.0g.
The sample consisted of a mixture of clayish sandy soil, sandstones, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 10. ASET97607 / 100787 / 10. ENRS2069 - A14/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 453.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 11. ASET97607 / 100787 / 11. ENRS2069 - A14/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 481.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 12. ASET97607 / 100787 / 12. ENRS2069 - A15/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 458.0g.
The sample consisted of a mixture of clayish sandy soil, paint flakes, sandstones, organic fibres, stones and plant matter.
No asbestos detected.

Ω Sample No. 13. ASET97607 / 100787 / 13. ENRS2069 - A15/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 4.0 cm
Approximate total dry weight of soil = 376.0g.
The sample consisted of a mixture of clayish sandy soil, stones, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 14. ASET97607 / 100787 / 14. ENRS2069 - A15/TP3-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 470.0g.
The sample consisted of a mixture of clayish sandy soil, sandstones, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 15. ASET97607 / 100787 / 15. ENRS2069 - A15/TP4-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 488.0g.
The sample consisted of a mixture of clayish sandy soil, sandstones, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 16. ASET97607 / 100787 / 16. ENRS2069 - A15/TP5-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 437.0g.
The sample consisted of a mixture of clayish sandy soil, stones, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 17. ASET97607 / 100787 / 17. ENRS2069 - A15/TP6-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 490.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 18. ASET97607 / 100787 / 18. ENRS2069 - A16/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 420.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 19. ASET97607 / 100787 / 19. ENRS2069 - A17/SP1-1.
Approx dimensions 10.0 cm x 10.0 cm x 5.1 cm
Approximate total dry weight of soil = 585.0g.
The sample consisted of a mixture of clayish sandy soil, stones, plaster like material, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 20. ASET97607 / 100787 / 20. ENRS2069 - A17/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 442.0g.
The sample consisted of a mixture of clayish soil, organic fibres, stones and plant matter.
No asbestos detected.

Reported by,



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

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 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.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET97607 / 100787 / 21 - 43
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

25 November 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of twenty three samples out of forty three samples, forwarded by Environment & Natural Resource Solutions on 24 November 2021, for analysis for asbestos.

1.Introduction: Twenty three samples out of forty three samples forwarded were examined and analysed for the presence of asbestos on 25 November 2021.

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 WA/ NEPM Guidelines).

3. Results :

Sample No. 21. ASET97607 / 100787 / 21. ENRS2069 - A18/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 8.9 cm
Approximate total dry weight of soil = 889.0g.
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 22. ASET97607 / 100787 / 22. ENRS2069 - A18/TP2-0.4.
Approx dimensions 10.0 cm x 10.0 cm x 8.4 cm
Approximate total dry weight of soil = 844.0g.
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 23. ASET97607 / 100787 / 23. ENRS2069 - A18/TP4-0.6.
Approx dimensions 10.0 cm x 10.0 cm x 7.2 cm
Approximate total dry weight of soil = 722.0g.
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 24. ASET97607 / 100787 / 24. ENRS2069 - A19/TP2-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 4.9 cm
Approximate total dry weight of soil = 494.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of plastic, wood chips and plant matter.
No asbestos detected.

Sample No. 25. ASET97607 / 100787 / 25. ENRS2069 - A19/TP4-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.5 cm
Approximate total dry weight of soil = 396.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones, fragments of cement, wood chips and plant matter.
No asbestos detected.

Sample No. 26. ASET97607 / 100787 / 26. ENRS2069 - A20/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.2 cm
Approximate total dry weight of soil = 518.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of cement and plant matter.
No asbestos detected.

Sample No. 27. ASET97607 / 100787 / 27. ENRS2069 - A20/TP2-0.2.
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 clayish sandy soil, stones, fragments of cement, glass, paint flakes, wood chips, animal and plant matter.
No asbestos detected.

Ω Sample No. 28. ASET97607 / 100787 / 28. ENRS2069 - A20/TP3-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 4.8 cm
Approximate total dry weight of soil = 479.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of animal and plant matter.
No asbestos detected.

Sample No. 29. ASET97607 / 100787 / 29. ENRS2069 - A22/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.2 cm
Approximate total dry weight of soil = 519.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of cement, wood chips and plant matter.
No asbestos detected.

Sample No. 30. ASET97607 / 100787 / 30. ENRS2069 - A23/TP1-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 7.8 cm
Approximate total dry weight of soil = 776.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of wood chips and plant matter.
No asbestos detected.

Ω Sample No. 31. ASET97607 / 100787 / 31. ENRS2069 - A24/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 4.5 cm
Approximate total dry weight of soil = 426.0g.
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Ω Sample No. 32. ASET97607 / 100787 / 32. ENRS2069 - A25/TP3-0.5.
Approx dimensions 10.0 cm x 10.0 cm x 4.1 cm
Approximate total dry weight of soil = 392.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of glass, wood chips and plant matter.
No asbestos detected.

Sample No. 33. ASET97607/ 100787/ 33. ENRS2069 - A29/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.1 cm
Approximate total dry weight of soil = 341.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of plastic and plant matter.
No asbestos detected.

Sample No. 34. ASET97607 / 100787 / 34. ENRS2069 - A29/TP2/0.1.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 306.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of cement and plant matter.
No asbestos detected.

Ω Sample No. 35. ASET97607 / 100787 / 35. ENRS2069 - A30/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 4.7 cm
Approximate total dry weight of soil = 465.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of wood chips and plant matter.
No asbestos detected.

Sample No. 36. ASET97607 / 100787 / 36. ENRS2069 - A31/TP1-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 500.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones, fragments of cement, glass, paint flakes, plastic, wood chips and plant matter.
No asbestos detected.

Sample No. 37. ASET97607 / 100787 / 37. ENRS2069 - A34/TP1-0.1.
Approx dimensions 10.0 cm x 10.0 cm x 8.5 cm
Approximate total dry weight of soil = 854.0g.
The sample consisted of a mixture of clayish sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 38. ASET97607 / 100787 / 38. ENRS2069 - A34/TP2-0.1.
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 clayish sandy soil, stones, fragments of brick, cement, wood chips and plant matter.
No asbestos detected.

Sample No. 39. ASET97607 / 100787 / 39. ENRS2069 - A34/TP3-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 8.3 cm
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones, fragments of fibre cement* (AF), wood chips and plant matter.
Chrysotile* (Approximate estimated weight = 0.012g) asbestos detected.
Approximate total dry weight of soil = 827.0g.
Approximate estimated weight of asbestos in soil in the form of AF = 0.012g.
Approximate w/w percentage of asbestos in soil in the form of AF = 0.001%.

Sample No. 40. ASET97607 / 100787 / 40. ENRS2069 - A34/TP4-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 9.2 cm
Approximate total dry weight of soil = 915.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of cement, wood chips and plant matter.
No asbestos detected.

Ω Sample No. 41. ASET97607 / 100787 / 41. ENRS2069 - A36/SP1-1.
Approx dimensions 10.0 cm x 10.0 cm x 3.2 cm
Approximate total dry weight of soil = 315.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of plastic, wood chips and plant matter.
No asbestos detected.

Ω Sample No. 42. ASET97607 / 100787 / 42. ENRS2069 - A36/SP1-2.
Approx dimensions 10.0 cm x 10.0 cm x 3.2 cm
Approximate total dry weight of soil = 112.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones, fragments of plaster, wood chips and plant matter.
No asbestos detected.

Ω Sample No. 43. ASET97607 / 100787 / 43. ENRS2069 - A25/TP1-0.5.
Approx dimensions 10.0 cm x 10.0 cm x 4.3 cm
Approximate total dry weight of soil = 426.0g.
The sample consisted of a mixture of clayish sandy soil, stones, fragments of 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

NATA
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 and/ or highly weathered ACM that will easily crumble.
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.

ASET 98121/101301/1-2

CHAIN OF CUSTODY - ENRS

ENRS
Environment & Natural Resource Solutions

Consultant:	ENRS	**ENRS Project Name/Number:**	ENRS2069
Project Mgr:	Rohan Last (0401 518 443)	**Site Location/Address:**	Elembra West ASB ID
Sampler:	CA	**PO No.:**	ENRS2069
Address:	108 Jerry Bailey Rd, Shoalhaven Heads, NSW, 2535	**Lab Services Quote No. :**	-
Delivery:	o'night express	**Date results required:**	15/12/2021
Email:	lab@enrs.com.au	**Or choose:**	standard / 1 day / 2 day / 3 day
Phone:	02 4448 5490	*Note: inform lab in advance if urgent turnaround is required*	*surcharge applies*

Lab: ASET
(Aust. Safer Env. & Technology)
PO Box 1644
Hornsby Westfield NSW 1635
Phone: 02 9987 2183
E-mail: INFO@AUSSET.COM.AU
Contact: Mahen & Amalka

Sample information				Tests Required																Comments
Lab Sample ID	ENRS Sample ID	Date sampled	Type of sample	HOLD	Asbestos in Soil/Dust (NEPM W/W%)	Asbestos in Material	Asbestos Fibre Count	Asbestos in Water	asbestos w/w%	SMF	No Analysis required - dispose of sample									sample description
1	A13/TP5-F1	14/12/2021	Material			1														
2	A21/F1	14/12/2021	Material			1														
			Total		0	2	0	0	0	0	0									

Relinquished by (company):	ENRS	**Received by (company):**	ASET
Print Name:	Chris Allen	**Print Name:**	AMALKA
Date & Time:	14/12/2021	**Date & Time:**	8:30
Signature:		**Signature:**	

Samples Received: Cool or Ambient (circle one)
Temperature Recieved at: (if applicable)
Transported by: Hand delivered / courier
Page No: 1 of 1

URGENT

RECEIVED
16 DEC 2021
BY: AD 8:30

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET98121 / 101301 / 1 – 2
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

16 December 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Dear Rohan

Asbestos Identification
This report presents the results of two samples, forwarded by Environment & Natural Resource Solutions on 16 December 2021, for analysis for asbestos.

1.Introduction: Two samples forwarded were examined and analysed for the presence of asbestos.

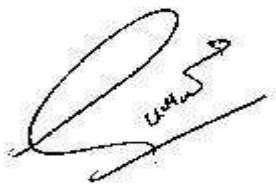
2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Australian Standard AS 4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction) (Qualitative Analysis only).**

3. Results :

Sample No. 1. ASET98121 / 101301 / 1. ENRS2069 - A13/TP5-F1.
Approx dimensions 8.3 cm x 7.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Sample No. 2. ASET98121 / 101301 / 2. ENRS2069 - A21/F1.
Approx dimensions 2.7 cm x 2.0 cm x 0.5 cm
The sample consisted of a fragment of a fibre cement material.
Chrysotile asbestos detected.

Reported by,



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.

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.



ASET98102/101282/1-7

URGENT

CHAIN OF CUSTODY - ENRS

ENRS
Environment & Natural Resource Solutions

Consultant:	ENRS	ENRS Project Name/Number:	ENRS2069	Lab:	ASET (Aust. Safer Env. & Technology)
Project Mgr:	Rohan Last (0401 518 443)	Site Location/Address:	Elembra West ASB ID		PO Box 1644
Sampler:	CA	PO No.:	ENRS2069		Hornsby Westfield NSW 1635
Address:	108 Jerry Bailey Rd, Shoalhaven Heads, NSW, 2535	Lab Services Quote No. :	-	Phone:	02 9987 2183
Delivery:	o'night express	Date results required:	15/12/2021	E-mail:	INFO@AUSSET.COM.AU
Email:	lab@enrs.com.au	Or choose:	standard / 1 day / 2 day / 3 day	Contact:	Mahen & Amalka
Phone:	02 4448 5490	*Note: Inform lab in advance if urgent turnaround is required - surcharge applies*			

Sample information				Tests Required															Comments
Lab Sample ID	ENRS Sample ID	Date sampled	Type of sample	HOLD	Asbestos in Soil/Dust (NEPM W/W%)	Asbestos in Material	Asbestos Fibre Count	Asbestos in Water	asbestos w/w%	SMF	No Analysis required - dispose of sample								sample description
1	A13/TP2-0.2	14/12/2021	Soil		1														
2	A13/TP3-0.2	14/12/2021	Soil		1														
3	A13/TP4-0.2	14/12/2021	Soil		1														
4	A13/TP5-0.2	14/12/2021	Soil		1														
5	A17/TP3-0.3	14/12/2021	Soil		1														
6	A17/TP4-0.3	14/12/2021	Soil		1														
7	A17/TP5-0.3	14/12/2021	Soil		1														
			Total		7	0	0	0	0	0	0								

Relinquished by (company):	ENRS	Received by (company):	ASET	Samples Received: Cool or Ambient (circle one)
Print Name:	Chris Allen	Print Name:		Temperature Recieved at: (if applicable)
Date & Time:	14/12/2021	Date & Time:	15/12/21 9a	Transported by: Hand delivered / courier
Signature:		Signature:		Page No: 1 of 1

RECEIVED
15 DEC 2021
BY:

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET98102 / 101282 / 1 – 7
Your ref : ENRS2069 – Elembra West ASB ID
NATA Accreditation No: 14484

15 December 2021

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of seven samples, forwarded by Environment & Natural Resource Solutions on 15 December 2021, for analysis for asbestos.

1.Introduction: Seven samples forwarded were examined and analysed for the presence of asbestos.

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 WA/ NEPM Guidelines.

3. Results :

Sample No. 1. ASET98102 / 101282 / 1. ENRS2069 - A13/TP2-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 408.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, timber char, sandstones, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET98102 / 101282 / 2. ENRS2069 - A13/TP3-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 423.0g.
The sample consisted of a mixture of clayish sandy soil, stones, sandstones, organic fibres, timber char and plant matter.
No asbestos detected.

Sample No. 3. ASET98102 / 101282 / 3. ENRS2069 - A13/TP4-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 421.0g.
The sample consisted of a mixture of clayish sandy soil, timber char, organic fibres, sandstones, stones and plant matter.
No asbestos detected.

Ω Sample No. 4. ASET98102 / 101282 / 4. ENRS2069 - A13/TP5-0.2.
Approx dimensions 10.0 cm x 10.0 cm x 3.8 cm
Approximate total dry weight of soil = 328.0g.
The sample consisted of a mixture of clayish sandy soil, stones, timber char, sandstones, organic fibres and plant matter.
No asbestos detected.

Sample No. 5. ASET98102 / 101282 / 5. ENRS2069 - A17/TP3-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 405.0g.
The sample consisted of a mixture of clayish sandy soil, stones, wood chips, timber char, sandstones, organic fibres and plant matter.
No asbestos detected.

Ω Sample No. 6. ASET98102 / 101282 / 6. ENRS2069 - A17/TP4-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 4.0 cm
Approximate total dry weight of soil = 364.0g.
The sample consisted of a mixture of clayish sandy soil, sandstones, organic fibres, timber char, stones and plant matter.
No asbestos detected.

Sample No. 7. ASET98102 / 101282 / 7. ENRS2069 - A17/TP5-0.3.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
Approximate total dry weight of soil = 432.0g.
The sample consisted of a mixture of clayish sandy soil, stones, sandstones, organic fibres, timber char and plant matter.
No asbestos detected.

Reported by,



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

NATA
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 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.

ASET98534/101714/1-3

URGENT

CHAIN OF CUSTODY - ENRS

ENRS
Environment & Natural Resource Solutions

Consultant:	ENRS	**ENRS Project Name/Number:**	ENRS2069	**Lab:**	ASET (Aust. Safer Env. & Technology) PO Box 1644 Hornsby Westfield NSW 1635
Project Mgr:	Rohan Last (0401 518 443)	**Site Location/Address:**	Elembra West ASB ID		
Sampler:	CA	**PO No.:**	ENRS2069		
Address:	108 Jerry Bailey Rd, Shoalhaven Heads, NSW, 2535	**Lab Services Quote No. :**	-		
Delivery:	o'night express	**Date results required:**	19/01/2022	**Phone:**	02 9987 2183
Email:	lab@enrs.com.au	**Or choose:**	standard / 1 day / 2 day / 3 day	**E-mail:**	INFO@AUSSET.COM.AU
Phone:	02 4448 5490	*Note: longer holding times may apply - surcharge applies*		**Contact:**	Mahen & Amalka

Sample information				Tests Required																Comments
Lab Sample ID	ENRS Sample ID	Date sampled	Type of sample	HOLD	Asbestos in Soil/Dust (NEPM W/W%)	Asbestos in Material	Asbestos Fibre Count	Asbestos in Water	asbestos w/w%	SMF	No Analysis required - dispose of sample									sample description
1	A33/TP1-0 2	18/01/2022	Soil		1															
2	A33/TP2-0.3	18/01/2022	Soil		1															
3	A33/TP3-0.3	18/01/2022	Soil		1															
			Total		3	0	0	0	0	0	0									

Relinquished by (company):	ENRS	**Received by (company):**	ASET	**Samples Received:**	Cool or Ambient (circle one)
Print Name:	Chris Allen	**Print Name:**		**Temperature Recieved at:**	(if applicable)
Date & Time:	18/01/2022	**Date & Time:**	19/1/22 9m	**Transported by:**	Hand delivered / courier
Signature:		**Signature:**			Page No: 1 of 1

RECEIVED
19 JAN 2022
BY:

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET98534 / 101714 / 1 - 3
Your ref : ENRS2069 - Elembra West ASB ID
NATA Accreditation No: 14484

19 January 2022

Environment & Natural Resource Solutions
108 Jerry Bailey Road
Shoalhaven Heads NSW 2535

Attn: Mr Rohan Last

Accredited for compliance with ISO/IEC 17025 - Testing.

Dear Rohan

Asbestos Identification
This report presents the results of three samples forwarded by Environment & Natural Resource Solutions on 19 January 2022 for analysis for asbestos.

1.Introduction: Three samples forwarded were examined and analysed for the presence of asbestos.

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 AS4964 - 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. ASET98534 / 101714 / 1. ENRS2069 - A33/ TP1 - 0.2.**
Approx dimensions 10.01 cm x 10.0 cm x 7.4 cm
Approximate total dry weight of soil = 740.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET98534 / 101714 / 2. ENRS2069 - A33/ TP2 - 0.3.
Approx dimensions 10.0 cm x 10.0 cm x 8.6 cm
Approximate total dry weight of soil = 862.0g.
The sample consisted of a mixture of clayish sandy soil, organic fibres, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET98534 / 101714 / 3. ENRS2069 - A33/ TP3 - 0.3.
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 clayish sandy soil, organic fibres, stones and plant matter.
No asbestos detected.

Reported by



Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

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 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 AS4964-2004. 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.

Appendix C

Laboratory Certificates of Analysis (COA) & Chain of Custody (COC) – Water

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

Chain of Custody

ALS

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4423 2063 E: nowra@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	108 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 4 Day TAT	Custody Seal Intact?	Yes / No / N/A
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WO/001/21	COC SEQUENCE NUMBER (Circle)	Free Ice / frozen ice bricks present upon receipt?	Yes / No / N/A
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	COC: (1) 2 3 4 5 6 7	Random Sample Temperature on Receipt:	11.2 °C
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	OF: (1) 2 3 4 5 6 7	Other comment:	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC Emailed to ALS?	(YES / NO)	EDD FORMAT (or default):	DATE/TIME: 25/11/2021	DATE/TIME: 25/11/21 1600	DATE/TIME: / DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):	labEnrs.com.au				
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	W-4	W-26	W-12	M3 (F.Coliform & E.Coli)	Salmonella	NT-13			Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	A27-SW01	25/11/2021	Water	Bottles			1	1	1	1	1			
	A27-DUP01	25/11/2021	Water	Bottles		1								
	A27-R01	25/11/2021	Water	Bottles		1								
				TOTAL	0	2	1	1	1	1	1	0		

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserv
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugol's Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

Environmental Division
Wollongong
Work Order Reference
EW2105036

Telephone : 02 42253125

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EW2105036**	Page	: 1 of 9
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: Chris Allen	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: ----	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - 48 Campbell St - DSI	Date Samples Received	: 25-Nov-2021 15:07
Order number	: ENRS2069	Date Analysis Commenced	: 26-Nov-2021
C-O-C number	: ----	Issue Date	: 06-Dec-2021 12:45
Sampler	: Client - CA		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Sarah Griffiths	Microbiologist	Sydney Microbiology, Smithfield, NSW
Uma Nagendiram	Subcontracting Coordinator	WRG Subcontracting, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, 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 Contact 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.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- MF = membrane filtration
- CFU = colony forming unit
- EP075 (SIM): Where reported, 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.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the 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.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW006 is ALS's internal code and is equivalent to AS4276.7.
- EA016: Calculated TDS is determined from Electrical conductivity using a conversion factor of 0.65.
- Salmonella - VIDAS (MM625) is conducted by ALS Scoresby NATA accreditation no. 992, site no. 989.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A27-SW01	A27-DUP01	A27-R01	----	----
			Sampling date / time	25-Nov-2021 00:00	25-Nov-2021 00:00	25-Nov-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	EW2105036-001	EW2105036-002	EW2105036-003	--------	--------
				Result	Result	Result	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	6.28	----	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	194	----	----	----	----
EA016: Calculated TDS (from Electrical Conductivity)								
Total Dissolved Solids (Calc.)	----	1	mg/L	126	----	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	17	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	17	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	17	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	5	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	35	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	----	----	----	----
Magnesium	7439-95-4	1	mg/L	3	----	----	----	----
Sodium	7440-23-5	1	mg/L	11	----	----	----	----
Potassium	7440-09-7	1	mg/L	25	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A27-SW01	A27-DUP01	A27-R01	----	----
			Sampling date / time	25-Nov-2021 00:00	25-Nov-2021 00:00	25-Nov-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	EW2105036-001	EW2105036-002	EW2105036-003	--------	--------
				Result	Result	Result	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.07**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.01**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.01**	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	----	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**1.43**	----	----	----	----
ø Total Cations	----	0.01	meq/L	**1.46**	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L	<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L	<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L	<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L	<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L	<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L	<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L	<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L	<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L	<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L	<2.0	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A27-SW01	A27-DUP01	A27-R01	----	----
			Sampling date / time	25-Nov-2021 00:00	25-Nov-2021 00:00	25-Nov-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	EW2105036-001	EW2105036-002	EW2105036-003	--------	--------
				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Total Chlordane (sum)	----	0.5	µg/L	<0.5	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	----	----	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	----	----	----	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	----	----	----	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	----	----	----	----
Diazinon	333-41-5	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	----	----	----	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	----	----	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	----	----	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	----	----	----	----
Parathion	56-38-2	2.0	µg/L	<2.0	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	----	----	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	----	----	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	----	----	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	----	----	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	----	----	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A27-SW01	A27-DUP01	A27-R01	----	----
			Sampling date / time	25-Nov-2021 00:00	25-Nov-2021 00:00	25-Nov-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	EW2105036-001	EW2105036-002	EW2105036-003	--------	--------
				Result	Result	Result	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	<2	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	----	----
MM625: Salmonella - VIDAS (absence / presence)								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A27-SW01	A27-DUP01	A27-R01	----	----
			Sampling date / time	25-Nov-2021 00:00	25-Nov-2021 00:00	25-Nov-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	EW2105036-001	EW2105036-002	EW2105036-003	--------	--------
				Result	Result	Result	----	----
MM625: Salmonella - VIDAS (absence / presence) - Continued								
***Salmonella* spp.**	----	1	-	**Not Detected**	----	----	----	----
MW006: Faecal Coliforms & E.coli by MF								
Faecal Coliforms	----	1	CFU/100mL	**8000**	----	----	----	----
Escherichia coli	----	1	CFU/100mL	**8000**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	**74.5**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	**63.3**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	**21.9**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	**50.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%	**58.4**	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	**66.0**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%	**78.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	**84.2**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**119**	**120**	**102**	----	----
Toluene-D8	2037-26-5	2	%	**99.9**	**103**	**102**	----	----
4-Bromofluorobenzene	460-00-4	2	%	**92.8**	**95.6**	**99.6**	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	67	111
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	67	111
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(WATER) EP068A: Organochlorine Pesticides (OC)
(WATER) EP068B: Organophosphorus Pesticides (OP)
(WATER) EP068S: Organochlorine Pesticide Surrogate
(WATER) EP068T: Organophosphorus Pesticide Surrogate
(WATER) EA005P: pH by PC Titrator
(WATER) ED037P: Alkalinity by PC Titrator
(WATER) EA016: Calculated TDS (from Electrical Conductivity)
(WATER) EA010P: Conductivity by PC Titrator
(WATER) EK040P: Fluoride by PC Titrator
(WATER) ED045G: Chloride by Discrete Analyser
(WATER) ED041G: Sulfate (Turbidimetric) as SO4 2- by DA
(WATER) EK071G: Reactive Phosphorus as P by discrete analyser
(WATER) EK055G: Ammonia as N by Discrete Analyser
(WATER) EN055: Ionic Balance
(WATER) EK058G: Nitrate as N by Discrete Analyser
(WATER) EK057G: Nitrite as N by Discrete Analyser
(WATER) EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser
(WATER) ED093F: Dissolved Major Cations
(WATER) EA065: Total Hardness as CaCO3
(WATER) EG035F: Dissolved Mercury by FIMS
(WATER) EG020F: Dissolved Metals by ICP-MS
(WATER) EP080/071: Total Petroleum Hydrocarbons
(WATER) EP080: BTEXN
(WATER) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions
(WATER) EP080S: TPH(V)/BTEX Surrogates
(WATER) EP075(SIM)B: Polynuclear Aromatic Hydrocarbons
(WATER) EP075(SIM)T: PAH Surrogates
(WATER) EP075(SIM)S: Phenolic Compound Surrogates
(WATER) MW006: Faecal Coliforms & E.coli by MF
(WATER) MM625: Salmonella - VIDAS (absence / presence)

T.A.T

Chain of Custody

ENRS
ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

ALS

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541
Ph: 02 4425 2063 E: nowra@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500
Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:	168 Jerry Bailey Rd Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 17/12/2021
PROJECT NO./PO:	ENRS2069	ALS QUOTE NO.: WO/001/21	
SITE/DESCRIPTION:	48 Campbell St - DSI	COUNTRY OF ORIGIN:	
PROJECT MANAGER:	ENRSLAB	CONTACT PH: 02 4448 5490 / 0401518443	
SAMPLER:	CA	SAMPLER MOBILE: 0478 725 692	
COC Emailed to ALS? (YES / NO)		EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are listed):		lab@enrs.com.au	
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)
COC: (1) 2 3 4 5 6 7
OF: (1) 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 14/12/2021	DATE/TIME:	DATE/TIME:	DATE/TIME: 14/12/21 7pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	HOLD	W-4 SG	W-26 SG	pH, EC, TSS	Hardness					Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	A35 / SW01	14/12/2021	Water	Bottles			1	1	1					
2	A35 / DUP2	14/12/2021	Water	Bottles		1		1	1					
3	A35 / R01	14/12/2021	Water	Bottles		1								
				TOTAL	0	2	1	2	2	0	0	0	0	

Environmental Division
Sydney
Work Order Reference
ES2145701

Telephone : +61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2145701**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Customer Services ES
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 9037 4708	Telephone	: +61-2-8784 8555
Project	: ENSR82069	Date Samples Received	: 14-Dec-2021 19:00
Order number	: ENR82069	Date Analysis Commenced	: 15-Dec-2021
C-O-C number	: ----	Issue Date	: 17-Dec-2021 17:22
Sampler	: CA		
Site	: ----		
Quote number	: WO/001/21		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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 Contact 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.

- EP075 (SIM): Where reported, 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.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the 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.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW01	A35 / DUP2	A35 / R01	----	----
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2145701-001	ES2145701-002	ES2145701-003	--------	--------
				Result	Result	Result	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.53**	----	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**278**	----	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**410**	----	----	----	----
ED093F: SAR and Hardness Calculations								
Total Hardness as CaCO3	----	1	mg/L	**45**	----	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.005**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	**0.0067**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	**0.003**	----	----	----	----
Copper	7440-50-8	0.001	mg/L	**0.030**	----	----	----	----
Lead	7439-92-1	0.001	mg/L	**0.018**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	**0.007**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**1.94**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	----	----
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW01	A35 / DUP2	A35 / R01	----	----
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2145701-001	ES2145701-002	ES2145701-003	--------	--------
				Result	Result	Result	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	<2	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	**19.5**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	**49.7**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%	**52.3**	----	----	----	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW01	A35 / DUP2	A35 / R01	----	----
			Sampling date / time	14-Dec-2021 00:00	14-Dec-2021 00:00	14-Dec-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2145701-001	ES2145701-002	ES2145701-003	--------	--------
				Result	Result	Result	----	----
EP075(S|M)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	1.0	%	69.4	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%	71.3	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	77.8	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	119	116	122	----	----
Toluene-D8	2037-26-5	2	%	114	113	115	----	----
4-Bromofluorobenzene	460-00-4	2	%	114	113	113	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com
☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com
☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com
☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph:03 8549 9600 E: samples.melbourne@alsenviro.com
☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com
☐ Perth: 10 Hod Way, Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsenviro.com
☐ Launceston: 27 Wellington St, Launceston TAS 7250 Ph: 03 6331 2158 E: launceston@alsenviro.com

CLIENT: ENRS Pty Ltd	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle): Custody Seal Intact? Yes No N/A
OFFICE: 108 Jerry Bailey Rd, Shoalhaven Heads		☒ Non Standard or urgent TAT (List due date): 21/1/22	Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT: ENRS2069 - A35 Sinfonia Water	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 20.1 °C
ORDER NUMBER: ENRS2069		OF: 1 2 3 4 5 6 7	Other comments:
PROJECT MANAGER: C.A	CONTACT PH:		
SAMPLER: C.A	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME: 18/1/22	DATE/TIME: 18/1/22 1700
Email Reports to (will default to PM if no other addresses are listed): labadmin@enrs.com.au		RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed): accounts@enrs.com.au		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES		W4 - SG	W26 - SG	pH, EC, TDS	Hardness				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	A35/SW NTH	18/1/22	water	Bottles				1	1	1				
	A35/SW STH	↓	↓	↓				1	1	1				
	A35/Dup 3						1		1	1				
	A35/R02						1							
				TOTAL			2	2	3	3				

Environmental Division Wollongong
Work Order Reference
EW2200244

Telephone : 02 42253125

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CERTIFICATE OF ANALYSIS

Work Order	: **EW2200244**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - A35 Surface Waters	Date Samples Received	: 19-Jan-2022 10:42
Order number	: ENRS2069	Date Analysis Commenced	: 19-Jan-2022
C-O-C number	: ----	Issue Date	: 25-Jan-2022 09:36
Sampler	: Client -CA		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 4		
No. of samples analysed	: 4		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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 Contact 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.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- EP075 (SIM): Where reported, 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.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the 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.
- TDS by method EA-015 may bias high for sample1 due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW NTH	A35/SW STH	A35/Dup3	A35/R02	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200244-001	EW2200244-002	EW2200244-003	EW2200244-004	--------
				Result	Result	Result	Result	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.76**	**7.01**	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**275**	**274**	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**300**	**198**	----	----	----
ED093F: SAR and Hardness Calculations								
Total Hardness as CaCO3	----	1	mg/L	**74**	**74**	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.008**	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	**0.003**	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	**0.019**	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	**0.003**	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.042**	<0.005	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	----
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	<100	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW NTH	A35/SW STH	A35/Dup3	A35/R02	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200244-001	EW2200244-002	EW2200244-003	EW2200244-004	--------
				Result	Result	Result	Result	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	----
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	----
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	**28.2**	**25.3**	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	**54.8**	**54.6**	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%	**62.7**	**52.1**	----	----	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	A35/SW NTH	A35/SW STH	A35/Dup3	A35/R02	----
			Sampling date / time	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	18-Jan-2022 00:00	----
Compound	CAS Number	LOR	Unit	EW2200244-001	EW2200244-002	EW2200244-003	EW2200244-004	--------
				Result	Result	Result	Result	----
EP075(S|M)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	1.0	%	**64.0**	**64.5**	**----**	**----**	**----**
Anthracene-d10	1719-06-8	1.0	%	**69.1**	**70.5**	**----**	**----**	**----**
4-Terphenyl-d14	1718-51-0	1.0	%	**69.3**	**70.5**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**123**	**119**	**121**	**112**	**----**
Toluene-D8	2037-26-5	2	%	**125**	**118**	**124**	**110**	**----**
4-Bromofluorobenzene	460-00-4	2	%	**117**	**113**	**112**	**104**	**----**

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Inter-Laboratory Testing

Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(WATER) EA005P: pH by PC Titrator

(WATER) EA010P: Conductivity by PC Titrator

(WATER) EA015: Total Dissolved Solids dried at 180 ± 5 °C

(WATER) ED093F: SAR and Hardness Calculations

(WATER) EG035T: Total Recoverable Mercury by FIMS

(WATER) EP075(SIM)B: Polynuclear Aromatic Hydrocarbons

(WATER) EP075(SIM)T: PAH Surrogates

(WATER) EP075(SIM)S: Phenolic Compound Surrogates

(WATER) EG020T: Total Metals by ICP-MS

(WATER) EP080/071: Total Petroleum Hydrocarbons

(WATER) EP080: BTEXN

(WATER) EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

(WATER) EP080S: TPH(V)/BTEX Surrogates

(WATER) EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup

(WATER) EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup

Appendix D

Test Pit & Borehole Logs

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A1/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300137	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152385	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.7: FILL - presumed re-worked natural ground comprising silty SANDS, weathered rock / cobbles and some foreign materials.	A1/TP1-0.3	A1/TP1-0.3	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7	0.7 - 0.8: Sandy CLAY, red - brown.					
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A1/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300161	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152382	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.7: FILL - presumed re-worked natural ground comprising silty SANDS, weathered rock / cobbles and some foreign materials.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4						
0.5						
0.6						
0.7	0.7 - 0.8: Sandy CLAY, red - brown. TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A4/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300229	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152371	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.7: FILL - presumed re-worked natural ground comprising sandy CLAY, weathered rock / cobbles and some foreign materials.	A4/TP1-0.3	A4/TP1-0.3	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7	0.7 - 0.8: Sandy CLAY, red - brown.					
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A4/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300243	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152369	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.7: FILL - presumed re-worked natural ground comprising sandy CLAY, weathered rock / cobbles and some foreign materials.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4						
0.5						
0.6						
0.7	0.7 - 0.8: Sandy CLAY, red - brown.					
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A6/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300302	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152343	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Residual agricultural lime.	A6/TP1-0.1	A6/TP1-0.1	0	-	-
0.2	0.1 - 0.2: Silty SAND, brown (topsoil).					
0.3	0.2 - 1.0: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A7-8/SP1

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300378	**LENGTH/WIDTH:**	0.5 X 0.5
NORTHING:	6152365	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Stockpiled material consisiting of silty SANDS, brown (topsoil) with rootlets and minor organic matter. Target depth reached.	A7-8/SP1	A7-8/SP1	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A9/TP1

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300364	**LENGTH/WIDTH:**	0.2 X 0.2
NORTHING:	6152424	**DEPTH:**	0.2

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SANDS, brown (topsoil). Inferred re-worked natural ground.	N/A	A9/TP1-0.1	0	-	-
0.2						
0.3						
0.4	Target depth reached.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A10/TP1

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300274	**LENGTH/WIDTH:**	0.3 X 0.3
NORTHING:	6152514	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SANDS, brown, becoming sandy CLAY. Inferred re-worked natural ground.	A10/TP1-0.2	A10/TP1-0.2	0	-	-
0.2	Target depth reached.		Duplicate			
0.3			Triplicate			
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A10/TP2

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300282	**LENGTH/WIDTH:**	0.3 X 0.3
NORTHING:	6152511	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SANDS, brown, becoming sandy CLAY. Inferred re-worked natural ground.	A10/TP2-0.2	A10/TP2-0.2	0	-	-
0.2	Target depth reached.					
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A11/TP1

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300288	**LENGTH/WIDTH:**	0.3 X 0.3
NORTHING:	6152490	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SANDS, brown, becoming sandy CLAY. Inferred re-worked natural ground.	A11/TP1-0.2	A11/TP1-0.2	0	-	-
0.2	Target depth reached.					
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A11/TP2

PROJECT No:	ENRS2069	**DATE:**	9/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	SHOVEL
EASTING:	300294	**LENGTH/WIDTH:**	0.3 X 0.3
NORTHING:	6152498	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SANDS, brown, becoming sandy CLAY. Inferred re-worked natural ground.	A11/TP2-0.2	A11/TP2-0.2	0	-	-
0.2	Target depth reached.					
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A12/SP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300243	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152418	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.8: Stockpiled material consisting of silty SANDS, with large quantities of foreign materials.	A12/SP1-1	A12/SP1-1	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8	0.8 - 1.0: Sandy CLAY, red - brown.					
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300256	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152445	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil) with some foreign material and fragments of fibre cement sheeting.	A13/TP1-F1	N/A	N/A	N/A	N/A
0.2	0.2 - 0.7: Sandy CLAY, red - brown.	A13/TP1-F2				
0.3						
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP2

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300255	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152447	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	A13/TP2-0.2	A13/TP2-0.2	0	-	-
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP3

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300252	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152440	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	A13/TP2-0.2	N/A	N/A	N/A	N/A
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP4

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300251	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152426	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	A13/TP4-0.2	N/A	N/A	N/A	N/A
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP5

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300264	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152428	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil). Minor foreign materials including 1x ACM fragment within topsoil.	A13/TP5-0.2 A13/TP5-F1	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4	0.2 - 0.4: Sandy CLAY, red-brown.					
0.5						
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP6

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300284	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152412	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP7

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300270	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152411	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A13/TP8

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300253	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152412	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2	0.2 - 0.4: Sandy CLAY, red - brown.					
0.3						
0.4	TP terminated in natural ground.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A14/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300360	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152347	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SANDs, brown (topsoil). Minor foreign mateirals.	A14/TP1-0.1	A14/TP1-0.1	0	-	-
0.2						
0.3	0.2 - 1.0: Sandy CLAY, red-brown.					
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0	TP terminated in natural ground.	N/A	A14/TP1-0.6	0	-	-
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A14/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300341	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152344	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Silty SAND, brown, with gravel and minor foreign materials.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4	0.4 - 0.8: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A14/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300331	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152356	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 – 0.6	0 - 0.6: Silty SAND, brown, with gravel and crusher dust.	A14/TP3-0.2	A14/TP3-0.2	0	-	-
0.6 – 1.1	0.6 - 1.1: Sandy CLAY, red-brown.					
1.1	TP terminated in natural ground.					

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300338	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152369	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP1-0.2	A15/TP1-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.7: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300330	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152365	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP2-0.2	A15/TP2-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.7: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300326	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152374	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP3-0.2	A15/TP3-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.7: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP4

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300333	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152385	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP4-0.2	A15/TP4-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.8: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP5

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300331	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152380	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP5-0.2	A15/TP5-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.7: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A15/TP6

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300331	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152380	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, darkl brown (topsoil) with foreign materials and fragments of AC sheeting.	A15/TP6-0.2	A15/TP6-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.6: Sandy CLAY, red-brown.					
0.5						
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A16/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300277	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152375	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, dark brown (topsoil).	A16/TP1-0.1				
0.2	0.1 - 0.9: Sandy CLAY, red - brown.		A16/TP1-0.2	0	-	-
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300265	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152353	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil). 1x ACM fragment on surface adjacent to TP.	A17/TP1-0.2	A17/TP1-0.2	0	-	-
0.2						
0.3	0.3 - 0.9: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6						
0.7						
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300279	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152346	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Sandy CLAY, red - brown (inferred re-worked natural)	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4	0.4 - 0.7: Silty SAND, brown (topsoil)					
0.5						
0.6						
0.7	0.7 - 1.1: Sandy CLAY, red - brown.					
0.8						
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/TP3

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300272	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152353	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Silty SAND, brown (FILL) with foreign materials including tiles, glass and metal.	A17/TP3-0.3	A17/TP3-0.3	0	-	-
0.2						
0.3						
0.4	0.4 - 0.7: Sandy CLAY, red - brown.					
0.5						
0.6						
0.7	TP terminated in natural ground.	-	A17/TP7-0.3	0	-	-
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/TP4

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300284	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152353	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil)	A17/TP4-0.3	-	-	-	-
0.2						
0.3	0.3 - 0.5: Sandy CLAY, red - brown.					
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/TP5

PROJECT No:	ENRS2069	**DATE:**	14/12/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300271	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152364	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil)	A17/TP5-0.3	-	-	-	-
0.2						
0.3	0.3 - 0.5: Sandy CLAY, red - brown.					
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A17/SP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300265	**LENGTH/WIDTH:**	N/A
NORTHING:	6152346	**DEPTH:**	N/A

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 – 3.4	Stockpiled material consisting of pale silty SAND and sandy CLAY. Foreign materials present including fragments of potential ACM (fibre cement sheeting)	A17/SP1-1	A17/SP1-1	0	-	-

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A18/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300342	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152333	**DEPTH:**	1.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.9: GRAVEL, fine - medium, with sand and crusher dust. ACM fragment on surface.	A18/TP1-0.2	A18/TP1-0.2 DUPLICATE TRIPLICATE	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9	0.9 - 1.2: Silty SAND, dark brown, with					
1.0						
1.1						
1.2	1.2 - 1.3: Sandy CLAY, red-brown.					
1.3	TP terminated in natural ground.					
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A18/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300355	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152324	**DEPTH:**	1.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.7: GRAVEL (fine - medium) with crusher dust.					
0.2						
0.3						
0.4		A18/TP2-0.4	A18/TP2-0.4	0	-	-
0.5						
0.6						
0.7	0.7 - 1.6: Sandy CLAY, red - brown.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4			A18/TP2-1.4	0	-	-
1.5						
1.6	TP terminated in natural ground.					
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A18/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300355	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152324	**DEPTH:**	1.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 – 3.4	0 - 1.4: GRAVEL (fine - medium) with crusher dust and some rootlets. 1.4 - 1.9: Sandy CLAY, red-brown. TP terminated in natural ground.	N/A	N/A	N/A	N/A	N/A

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A18/TP4

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300330	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152326	**DEPTH:**	1.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 1.1: GRAVEL (fine - medium) with crusher dust.					
0.2						
0.3						
0.4						
0.5						
0.6		A18/TP4-0.6	A18/TP4-0.6	0	-	-
0.7						
0.8						
0.9						
1.0						
1.1	1.1 1.8: Sandy CLAY, red-brown.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8	TP terminated in natural ground.					
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A19/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300365	**LENGTH/WIDTH:**	1.2 X 1.2
NORTHING:	6152339	**DEPTH:**	0.4

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Grass overlying brown silty SAND (topsoil). ACM fragments in shallow surface soils. 0.2 - 0.4: Becoming sandy CLAY, red-brown. TP terminated in natural ground.	A19/TP1-F1	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A19/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300364	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152332	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Silty SANDS, brown (topsoil) with foreign materials. Fragments of ACM sheeting in shallow soils.	A19/TP2-0.3	A19/TP2-0.3	0	-	-
0.2						
0.3						
0.4	0.4 - 1.0: Becoming sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A19/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300373	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152329	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Oragnic matter, silty SANDS and manure. ACM over ground surface.	N/A	N/A	N/A	N/A	N/A
0.2	0.1 - 0.4: FILL, weathered rock and gravel.					
0.3	0.4 - 1.1: Sandy CLAY, red-brown.					
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A19/TP4

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300373	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152329	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: FILL, crushed/weathered rock and gravel. ACM over ground surface.	A19/TP4-0.1	A19/TP4-0.1	0	-	-
0.2		-	A19/TP4-0.2	0	-	-
0.3						
0.4	0.4 - 1.1: Sandy CLAY, red-brown.					
0.5						
0.6		-	A19/TP4-0.6	0	-	-
0.7						
0.8						
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A19/TP5

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300373	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152329	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Silty SAND, brown, with gravel. Fragments of ACM over ground surface.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4	0.4 - 0.9: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A20/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300351	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152376	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND (topsoil) with some gravel. Foreign mateiral present.	A20/TP1-0.2	A20/TP1-0.2	0	-	-
0.2						
0.3	0.3 - 0.8: Sandy CLAY, red-brown.					
0.4						
0.5						
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A20/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300354	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152368	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND (topsoil) with some gravel. Foreign mateiral present. ACM fragments on ground surface.	A20/TP2-0.2	A20/TP2-0.2	0	-	-
0.2						
0.3						
0.4	0.3 - 0.8: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A20/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300367	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152381	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: Silty SAND, dark brown with some foreign materials. No ACM.	A20/TP3-0.2	A20/TP3-0.2	0	-	-
0.2						
0.3						
0.4	0.4 - 1.0: Sandy CLAY, red-brown.					
0.5						
0.6						
0.7						
0.8		N/A	A20/TP3-0.8	0	-	-
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A20/TP4

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300363	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152371	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Sandy CLAY, red-brown (presumed re-worked natural)	N/A	N/A	N/A	N/A	N/A
0.2						
0.3	0.3 - 0.45: Silty CLAY, dark brown.					
0.4						
0.5	0.45 - 0.9: Sandy CLAY, red-brown.					
0.6						
0.7						
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A22/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300269	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152446	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.15: Silty SAND, brown, with some gravel and blue metal. 0.15 - 0.3: Silty SAND, brown (topsoil). 0.3 - 0.5: Sandy CLAY, red - brown. TP terminated in natural ground.	A22/TP1-0.2	A22/TP1-0.2	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A23/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300280	**LENGTH/WIDTH:**	1.5 X 1.2
NORTHING:	6152452	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.4: GRAVEL (fine - medium) with crusher dust. 0.4 - 0.7: Sandy CLAY, red - brown. TP terminated in natural ground.	A23/TP1-0.3	A23/TP1-0.3	0	-	-

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A24/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300262	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152453	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil). ACM fragments present.	A24/TP1-0.2	A24/TP1-0.2	0	-	-
0.2						
0.3	0.2 - 0.6: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A25/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300252	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152516	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown (topsoil)					
0.2						
0.3	0.1 - 0.6: Silty SAND, red - brown (inferred natural ground)					
0.4						
0.5		A25/TP1-0.5	A25/TP1-0.5	0	-	-
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A25/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300239	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152515	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown (topsoil) 0.1 - 0.6: Silty SAND, red - brown (inferred natural ground) TP terminated in natural ground.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A25/TP3

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300238	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152503	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown (topsoil)					
0.2						
0.3	0.1 - 0.6: Silty SAND, red - brown (inferred natural ground)					
0.4						
0.5		A25/TP3-0.5	A25/TP3-0.5	0	-	-
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A25/TP4

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300249	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152501	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown (topsoil)	N/A	N/A	N/A	N/A	N/A
0.2	0.1 - 0.6: Silty SAND, red - brown (inferred natural ground)					
0.3						
0.4						
0.5						
0.6	TP terminated in natural ground.					
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A28/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300399	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152339	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.5: Gravel (medium - coarse) with crusher dust. No foreign materials or ACM.	-	A28/TP1-0.1	0	-	-
0.2		-	A28/TP1-0.2	0	-	-
0.3						
0.4						
0.5	0.5 - 0.9: Sandy CLAY, red - brown.					
0.6						
0.7						
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A28/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300413	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152399	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown, with organic matter/manure.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3	0.1 - 0.3: Silty SAND, red - brown					
0.4						
0.5	0.3 - 0.9: Sandy CLAY, red - brown.					
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A28/TP3

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300388	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152373	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown (topsoil). 0.1 - 0.5: Becoming sandy CLAY, red-brown. TP terminated in natural ground.	N/A	N/A	N/A	N/A	N/A
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A28/TP4

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300387	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152413	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.1: Silty SAND, brown (topsoil). 0.1 - 0.5: Becoming sandy CLAY, red-brown. TP terminated in natural ground.	N/A	N/A	N/A	N/A	N/A

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A28/TP5

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300413	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152399	**DEPTH:**	0.9

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.1: Silty SAND, brown, with organic matter/manure.	-	A28/TP5-0.1	0	-	-
0.2						
0.3	0.1 - 0.3: Silty SAND, dark brown (topsoil).	-	A28/TP5-0.3	0	-	-
0.4						
0.5	0.3 - 0.9: Sandy CLAY, becoming red - brown.					
0.6						
0.7		-	A28/TP7-0.7	0	-	-
0.8						
0.9	TP terminated in natural ground.					
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A29/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300361	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152308	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: FILL, silty sands, gravel, cobbles foreign materials and extensive fragments of AC sheeting.	A29/TP1-0.1	A29/TP1-0.1	0	-	-
0.2		-	A29/TP1-0.2	0	-	-
0.3						
0.4	0.4 - 1.0: Sandy CLAY, red - brown.					
0.5						
0.6						
0.7						
0.8						
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A29/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300373	**LENGTH/WIDTH:**	2.0 X 0.45
NORTHING:	6152296	**DEPTH:**	1.0

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: FILL, silty sands, gravel, cobbles foreign materials and extensive fragments of AC sheeting.	A29/TP2-0.1	A29/TP2-0.1	0	-	-
0.2		-	A29/TP2-0.2	0	-	-
0.3						
0.4	0.4 - 1.0: Sandy CLAY, red - brown.					
0.5						
0.6		-	A29/TP2-0.6	0	-	-
0.7						
0.8						
0.9						
1.0	TP terminated in natural ground.					
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A30/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300255	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152224	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2	0.2 - 0.7: Sandy CLAY, red - brown.					
0.3						
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A30/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300263	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152223	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.2: Silty SAND, brown (topsoil). Minor foreign materials present (metal, burnt wood). 0.2 - 0.7: Sandy CLAY, red - brown. TP terminated in natural ground.	A30/TP2-0.2	A30/TP2-0.2	0	-	-

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A30/TP3

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300270	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152221	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2	0.2 - 0.7: Sandy CLAY, red - brown.					
0.3						
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300345	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152269	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP2-0.2	0	-	-
0.3			Duplicate			
0.4			Triplicate			
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300436	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152314	**DEPTH:**	0.6

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP2-0.2	0	-	-
0.3						
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP3

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300474	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152410	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.7: Sandy CLAY, red - brown.	-	A32/TP3-0.2	0	-	-
0.3						
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP4

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300409	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152483	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.7: Sandy CLAY, red - brown.	-	A32/TP4-0.2	0	-	-
0.3						
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP5

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300190	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152467	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP5-0.2	0	-	-
0.3						
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP6

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300128	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152444	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP6-0.2	0	-	-
0.3						
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP7

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300199	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152333	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP7-0.2	0	-	-
0.3						
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP8

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300095	**LENGTH/WIDTH:**	0.5 X 0.5
NORTHING:	6152351	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: Silty SAND, brown (topsoil).					
0.2	0.2 - 0.5: Sandy CLAY, red - brown.	-	A32/TP8-0.2	0	-	-
0.3						
0.4						
0.5	TP terminated in natural ground.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A32/TP9

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300107	**LENGTH/WIDTH:**	0.5 X 0.5
NORTHING:	6152295	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.2: Silty SAND, brown (topsoil). 0.2 - 0.5: Sandy CLAY, red - brown. TP terminated in natural ground.	-	A32/TP9-0.2 Duplicate Triplicate	0	-	-

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A33/TP1

PROJECT No:	ENRS2069	**DATE:**	18/01/2022
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	Hand Auger / Shovel
EASTING:	300299	**LENGTH/WIDTH:**	0.3 x 0.3
NORTHING:	6152254	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Gravel with Sandy CLAY, tan.	A33/TP01-0.2	A33/TP1-0.2	0	-	-
0.2						
0.3	Target Depth Reached.					
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A33/TP2

PROJECT No:	ENRS2069	**DATE:**	18/01/2022
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	Hand Auger / Shovel
EASTING:	300314	**LENGTH/WIDTH:**	0.3 x 0.3
NORTHING:	6152369	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Gravel with Sandy CLAY, tan.					
0.2						
0.3	Target Depth Reached.	A33/TP02-0.3	A33/TP3-0.3	0	-	-
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A33/TP3

PROJECT No:	ENRS2069	**DATE:**	18/01/2022
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	Hand Auger / Shovel
EASTING:	300296	**LENGTH/WIDTH:**	0.3 x 0.3
NORTHING:	6152487	**DEPTH:**	0.3

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Gravel with Sandy CLAY, tan.					
0.2						
0.3	Target Depth Reached.	A33/TP03-0.3	A33/TP3-0.3 Duplicate Triplicate	0	-	-
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A31/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300346	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152351	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.5: Silty SANDS, brown, with gravel, foreign materials and fragments of AC sheeting.	A31/TP1-0.2	A31/TP2-0.2	0	-	-
0.2						
0.3						
0.4						
0.5	0.5 - 1.1: Sandy CLAY, red-brown.					
0.6						
0.7						
0.8						
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A34/TP1

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300342	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152363	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: GRAVEL (fine - medium) with crusher dust and potential slag. ACM fragments on ground surface.	A34/TP1-0.1	A34/TP1-0.1	0	-	-
0.2						
0.3						
0.4	0.2 - 0.7: Sandy CLAY, red - brown.					
0.5		-	A34/TP1-0.5	0	-	-
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A34/TP2

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300363	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152353	**DEPTH:**	0.8

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.2: GRAVEL (medium - coarse) with crusher dust and sand. ACM fragments on ground surface.	A34/TP2-0.1	A34/TP2-0.1	0	-	-
0.2	0.2 - 0.8: Sandy CLAY, red - brown.					
0.3						
0.4						
0.5						
0.6						
0.7						
0.8	TP terminated in natural ground.					
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A34/TP3

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300357	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152334	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.5: GRAVEL (medium - coarse) with sand and crusher dust. ACM fragments on ground surface.	A34/TP3-0.2	A34/TP3-0.2	0	-	-
0.2						
0.3						
0.4						
0.5	0.5 - 1.1: Sandy CLAY, red - brown.					
0.6						
0.7						
0.8		-	A34/TP3-0.8	0	-	-
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

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ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

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ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A34/TP4

PROJECT No:	ENRS2069	**DATE:**	19/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300332	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152347	**DEPTH:**	1.1

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.4: GRAVEL (fine - medium) with sand and crusher dust. ACM fragments on ground surface.	A34/TP4-0.2	A34/TP4-0.2	0	-	-
0.2						
0.3						
0.4	0.4 - 0.5: Silty SAND, dark brown.					
0.5	0.5 - 1.1: Sandy CLAY, red - brown.					
0.6						
0.7						
0.8		-	A34/TP4-0.5	0	-	-
0.9						
1.0						
1.1	TP terminated in natural ground.					
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A35/TP1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300495	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152476	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2						
0.3	0.3 - 0.7: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A35/TP2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300489	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152487	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.4: FILL - Silty SAND and sandy CLAY, brown, with extensive foreign materials including vehicle parts and engine and fragments of AC sheeting. 0.4 - 0.5: Presumed end of foreign materials. Test pit filled with water.	-	A35/TP2-0.2	0	-	-

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A35/TP3

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300479	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152488	**DEPTH:**	0.5

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4	0 - 0.4: FILL - Silty SAND and sandy CLAY, brown, with extensive foreign materials including vehicle parts, metal roof sheets and fragments of AC sheeting. 0.4 - 0.5: Presumed end of foreign materials. Test pit filled with water.	A35/TP3-F1 A35/TP3-F2	A35/TP3-0.2	0	-	-

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A35/TP4

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300475	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152516	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil).	N/A	N/A	N/A	N/A	N/A
0.2						
0.3	0.3 - 0.7: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A35/TP5

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	2T EXCAVATOR
EASTING:	300497	**LENGTH/WIDTH:**	1.5 X 0.45
NORTHING:	6152471	**DEPTH:**	0.7

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	0 - 0.3: Silty SAND, brown (topsoil).	-	A35/TP5-0.2	0	-	-
0.2						
0.3	0.3 - 0.7: Sandy CLAY, red - brown.					
0.4						
0.5						
0.6						
0.7	TP terminated in natural ground.					
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A36/SP1-1

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300203	**LENGTH/WIDTH:**	N/A
NORTHING:	6152407	**DEPTH:**	N/A

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	Stockpiled material consisting of silty SANDS, green-waste and a variety of foreign materials (non-putrescible waste).	A36/SP1-1	A36/SP1-1	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS

108 JERRY BAILEY ROAD ABN: 68 600 154 596
SHOALHAVEN HEADS NSW 2535
t: 02 4448 5490 e: projects@enrs.com.au

ENVIRONMENTAL INVESTIGATION LOG

TEST PIT ID: A36/SP1-2

PROJECT No:	ENRS2069	**DATE:**	20/11/2021
LOCATION:	48 Campbell St, Gerringong	**LOGGED BY:**	CA
CLIENT:	AP&S	**EXCAVATED BY:**	-
SURFACE RL:		**METHOD:**	5T EXCAVATOR
EASTING:	300216	**LENGTH/WIDTH:**	N/A
NORTHING:	6152405	**DEPTH:**	N/A

Depth (m)	(Interval m-m) Description (Soil TYPE, colour, consistency, grainsize, moisture, remarks)	Sample ID (Asbestos)	Sample ID (Chem)	PID Reading (ppm)	pH (field)	pH (FOX)
0.1	Stockpiled material consisting of silty SANDS, green-waste and a variety of foreign materials (non-putrescible waste).	A36/SP1-2	A36/SP1-2	0	-	-
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1.0						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2.0						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
3.0						
3.1						
3.2						
3.3						
3.4						

Graphic Diagram

Notes:

Descriptions are based on observations and hand testing of grab samples.
Mechanical Tests were not performed unless otherwise stated

Appendix E

Photographic Record of Site Conditions

Photograph 1: Preliminary AEC01



Photograph 2: Preliminary AEC02



Photograph 3: Preliminary AEC03



Photograph 4: Preliminary AEC



Photograph 5: Preliminary AEC05



Photograph 6: Preliminary AEC06



Photograph 7: Preliminary AEC07/AEC08



Photograph 8: Preliminary AEC09



Photograph 9: Preliminary AEC10



Photograph 10: Preliminary AEC11



Photograph 11: Preliminary AEC12



Photograph 12: Preliminary AEC13



Photograph 13: Preliminary AEC14



Photograph 14: Preliminary AEC15



Photograph 15: Preliminary AEC16



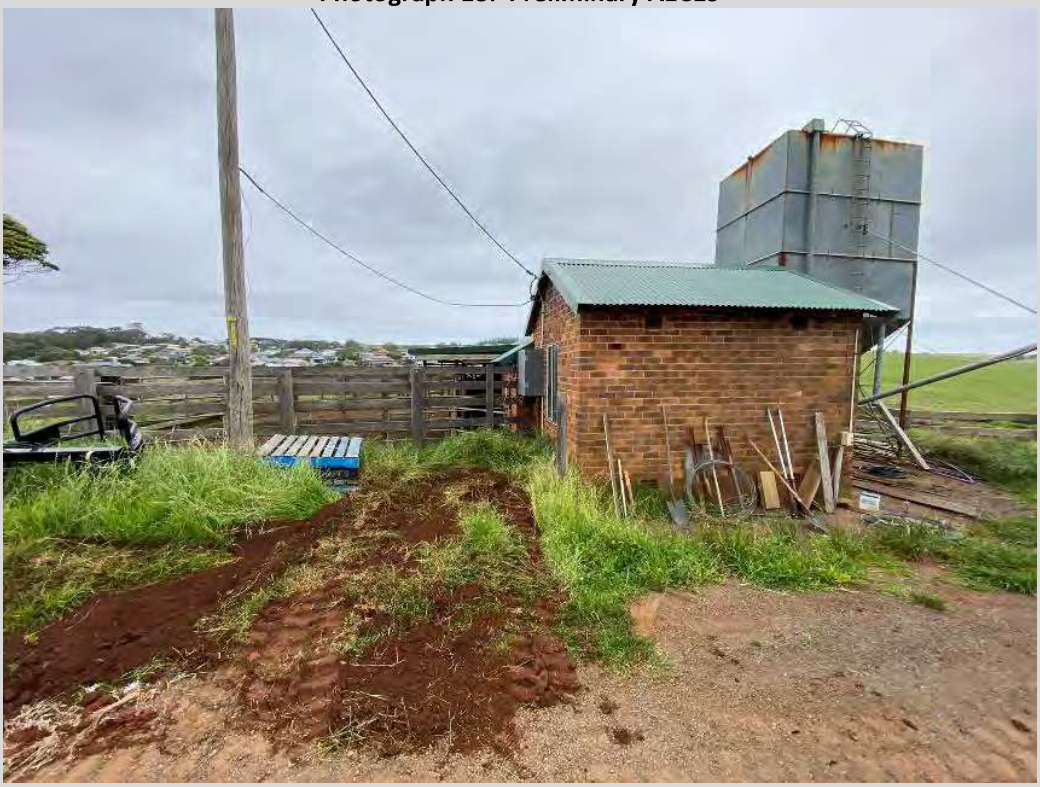
Photograph 16: Preliminary AEC17



Photograph 17: Preliminary AEC18



Photograph 18: Preliminary AEC19



Photograph 19: Preliminary AEC20



Photograph 20: Preliminary AEC21



Photograph 21: Preliminary AEC22



Photograph 22: Preliminary AEC23



Photograph 23: Preliminary AEC24



Photograph 24: Preliminary AEC25



Photograph 25: Preliminary AEC26



Photograph 26: Preliminary AEC27



Photograph 27: Preliminary AEC28



Photograph 28: Preliminary AEC29



Photograph 29: Preliminary AEC30



Photograph 30: Preliminary AEC31



Photograph 31: Preliminary AEC32



Photograph 32: Preliminary AEC33



Photograph 33: Preliminary AEC34



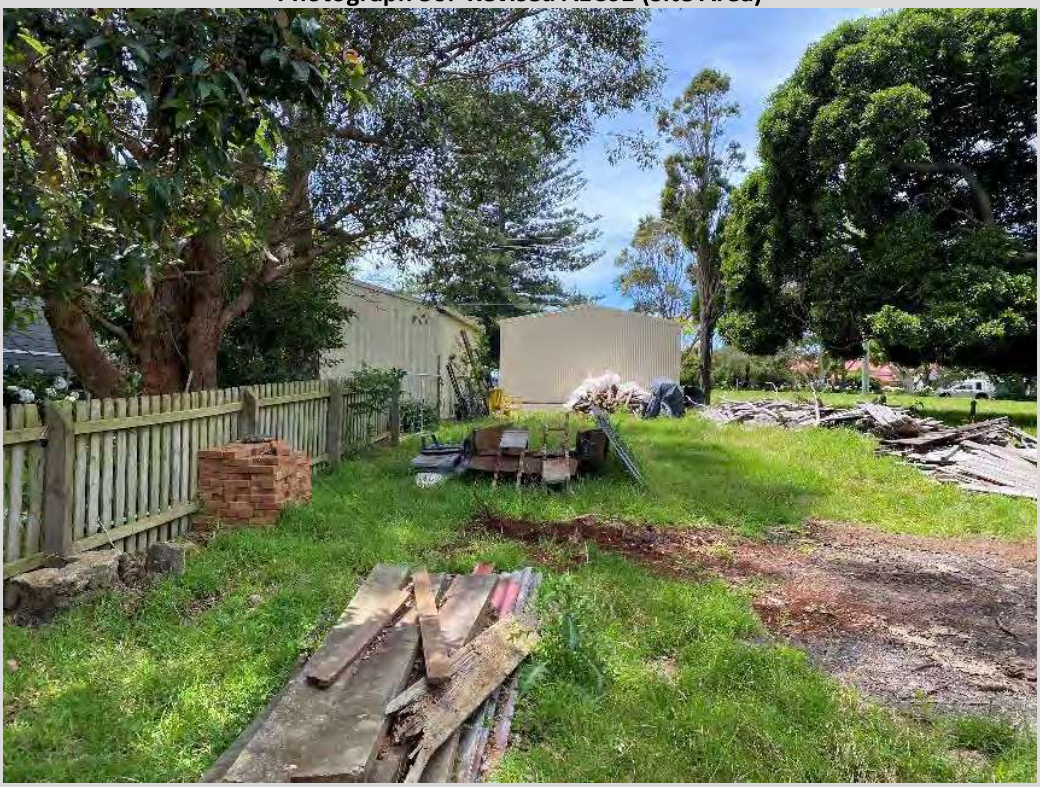
Photograph 34: Preliminary AEC35



Photograph 35: Preliminary AEC36



Photograph 36: Revised AEC01 (Site Area)



Photograph 37: Revised AEC-R01 (Asbestos in Soil Fragment)



Photograph 38: Revised AEC-R02



Photograph 39: Revised AEC-R03



Photograph 40: Revised AEC-R03



Photograph 41: Revised AEC-R03 (Surface ACM Fragment)



Photograph 42: Revised AEC-R04 (Gravel Ring Road, Friable Asbestos)



Photograph 43: Revised AEC-R04 (Gravel Ring Road, Friable Asbestos)



Photograph 44: Revised AEC-R05 (w/ ACM Fragments)



Photograph 45: Revised AEC-R05 (w/ ACM Fragments)



Photograph 46: Revised AEC-R05 (w/ ACM Fragments)



Photograph 47: Revised AEC-R06 (w/ Vehicle Engine)



Photograph 48: Revised AEC-R06 (w/ ACM Fragments)



Photograph 49: Revised AEC-R07



Photograph 50: Revised AEC-R07



Appendix F

Equipment Calibration Records

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
108 Jerry Bailey Road, Shoalhaven Heads,
NSW, 2535 T 02 4448 5490 M: 0401 518 443
E: projects@enrs.com.au www.enrs.com.au

EQUIPMENT CALIBRATION CERTIFICATE – PID

This Gas Meter has been performance checked / calibrated* as follows:

Calibration	Cal Value	Span Reading	Final Check	Pass (Y/N)
H_2S	25ppm	25	25	Y
O_2	18% vol	18	18	Y
O_2 (in fresh air)	20.9%	20.9	20.9	Y
CO	100ppm	100	100	Y
CH_4	2.5%	2.5	2.5	Y
Isobutylene	100pp	100	100	Y

Operations Check					
	Electrical Safety Tag Attached (AS/NZS 3760)		Tag No:		Valid to:
	Cleaned/Checked		In line Filter Check		Battery Status @_____100%

*Calibration gas traceability information is available upon request.

Please check the following items are received and that all items are cleaned and decontaminated before return. Items not returned for will be billed for at the full replacement cost.

	Sent	Returned	
1.	☐	☐	Yellow MultiRAE Hand Held PID Meter
2.	☐	☐	2m of Sampling Tube
4.	☐	☐	Battery Charger and AC/DC Power Supply
5.	☐	☐	Operating Quick Guide
6.	☐	☐	Spare In-Line Filters & Parts
7.	☐	☐	Carry Case
8.	☐	☐	Instrument Battery Status @_____100%

Equipment MODEL	MultiRAE PID Lite
Equipment Serial No.	M01C010297

Date: **19/11/2021** **Checked by:** **Christopher Allen**

Signed: 

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
108 Jerry Bailey Road, Shoalhaven Heads,
NSW, 2535 T 02 4448 5490 M: 0401 518 443
E: projects@enrs.com.au www.enrs.com.au

EQUIPMENT CALIBRATION CERTIFICATE – PID

This Gas Meter has been performance checked / calibrated* as follows:

Calibration	Cal Value	Span Reading	Final Check	Pass (Y/N)
H_2S	25ppm	25	25	Y
O_2	18% vol	18	18	Y
O_2 (in fresh air)	20.9%	20.9	20.9	Y
CO	100ppm	100	100	Y
CH_4	2.5%	2.5	2.5	Y
Isobutylene	100pp	100	100	Y

Operations Check					
	Electrical Safety Tag Attached (AS/NZS 3760)		Tag No:		Valid to:
	Cleaned/Checked		In line Filter Check		Battery Status @_____100%

*Calibration gas traceability information is available upon request.

Please check the following items are received and that all items are cleaned and decontaminated before return. Items not returned for will be billed for at the full replacement cost.

	Sent	Returned	
1.	☐	☐	Yellow MultiRAE Hand Held PID Meter
2.	☐	☐	2m of Sampling Tube
4.	☐	☐	Battery Charger and AC/DC Power Supply
5.	☐	☐	Operating Quick Guide
6.	☐	☐	Spare In-Line Filters & Parts
7.	☐	☐	Carry Case
8.	☐	☐	Instrument Battery Status @_____100%

Equipment MODEL	MultiRAE PID Lite
Equipment Serial No.	M01C010297

Date: 20/11/2021 **Checked by: Christopher Allen**

Signed: 

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
108 Jerry Bailey Road, Shoalhaven Heads,
NSW, 2535 T 02 4448 5490 M: 0401 518 443
E: projects@enrs.com.au www.enrs.com.au

EQUIPMENT CALIBRATION CERTIFICATE – PID

This Gas Meter has been performance checked / calibrated* as follows:

Calibration	Cal Value	Span Reading	Final Check	Pass (Y/N)
H_2S	25ppm	25	25	Y
O_2	18% vol	18	18	Y
O_2 (in fresh air)	20.9%	20.9	20.9	Y
CO	100ppm	100	100	Y
CH_4	2.5%	2.5	2.5	Y
Isobutylene	100pp	100	100	Y

Operations Check					
	Electrical Safety Tag Attached (AS/NZS 3760)		Tag No:		Valid to:
	Cleaned/Checked		In line Filter Check		Battery Status @_____100%

*Calibration gas traceability information is available upon request.

Please check the following items are received and that all items are cleaned and decontaminated before return. Items not returned for will be billed for at the full replacement cost.

	Sent	Returned	
1.	☐	☐	Yellow MultiRAE Hand Held PID Meter
2.	☐	☐	2m of Sampling Tube
4.	☐	☐	Battery Charger and AC/DC Power Supply
5.	☐	☐	Operating Quick Guide
6.	☐	☐	Spare In-Line Filters & Parts
7.	☐	☐	Carry Case
8.	☐	☐	Instrument Battery Status @_____100%

Equipment MODEL	MultiRAE PID Lite
Equipment Serial No.	M01C010297

Date: 14/12/2021 **Checked by: Christopher Allen**

Signed: 

ENVIRONMENT & NATURAL RESOURCE SOLUTIONS
108 Jerry Bailey Road, Shoalhaven Heads,
NSW, 2535 T 02 4448 5490 M: 0401 518 443
E: projects@enrs.com.au www.enrs.com.au

EQUIPMENT CALIBRATION CERTIFICATE – PID

This Gas Meter has been performance checked / calibrated* as follows:

Calibration	Cal Value	Span Reading	Final Check	Pass (Y/N)
H_2S	25ppm	25	25	Y
O_2	18% vol	18	18	Y
O_2 (in fresh air)	20.9%	20.9	20.9	Y
CO	100ppm	100	100	Y
CH_4	2.5%	2.5	2.5	Y
Isobutylene	100pp	100	100	Y

Operations Check					
☐	Electrical Safety Tag Attached (AS/NZS 3760)		Tag No:		Valid to:
☐	Cleaned/Checked	☐	In line Filter Check	☐	Battery Status @_____100%

*Calibration gas traceability information is available upon request.

Please check the following items are received and that all items are cleaned and decontaminated before return. Items not returned for will be billed for at the full replacement cost.

	Sent	Returned	
1.	☐	☐	Yellow MultiRAE Hand Held PID Meter
2.	☐	☐	2m of Sampling Tube
4.	☐	☐	Battery Charger and AC/DC Power Supply
5.	☐	☐	Operating Quick Guide
6.	☐	☐	Spare In-Line Filters & Parts
7.	☐	☐	Carry Case
8.	☐	☐	Instrument Battery Status @_____100%

Equipment MODEL	MultiRAE PID Lite
Equipment Serial No.	M01C010297

Date: **18/01/2022** **Checked by:** **Christopher Allen**

Signed: 

Appendix G

Laboratory Sample Receipt Numbers (SRN) & QC/QA Reports

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EW2105020**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
E-mail	: lab@enrs.com.au	E-mail	: Aneta.Prosaroski@ALSGlobal.com
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Facsimile	: 02 9037 4708	Facsimile	: W 02 42253128 N 02 44232083
Project	: ENRS2069	Page	: 1 of 4
Order number	: ENRS2069	Quote number	: EW2021ENVNAT0001 (WO/001/21)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 48 Campbell St - DSI		
Sampler	:		

Dates

Date Samples Received	: 24-Nov-2021 17:00	Issue Date	: 25-Nov-2021
Client Requested Due Date	: 01-Dec-2021	Scheduled Reporting Date	: **01-Dec-2021**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 9.8 - Ice present
Receipt Detail	:	No. of samples received / analysed	: 77 / 68

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
- **Analytical work for this work order will be conducted at ALS Sydney.**
- **Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.**
- **Please direct any queries you have regarding this work order to the above ALS laboratory contact.**
- 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.
- **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.**

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

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	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - MM804 Thermotolerant Coliforms & E.coli by MPN	SOIL - MM823 Salmonella (absence / presence)	SOIL - NT-2S Major Anions (Cl, SO4)	SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EW2105020-001	20-Nov-2021 00:00	A1/TP1-0.3		✓				✓	
EW2105020-002	20-Nov-2021 00:00	A4/TP1-0.3		✓				✓	
EW2105020-003	20-Nov-2021 00:00	A6/TP1-0.1		✓				✓	
EW2105020-004	10-Nov-2021 00:00	A7-8/SP1		✓				✓	
EW2105020-005	10-Nov-2021 00:00	A9/TP1-0.1		✓				✓	
EW2105020-006	10-Nov-2021 00:00	A10/TP1-0.2		✓				✓	
EW2105020-007	10-Nov-2021 00:00	A10/DUP1-0.2		✓					✓
EW2105020-008	10-Nov-2021 00:00	A10/TP2-0.2		✓				✓	
EW2105020-009	10-Nov-2021 00:00	A11/TP1-0.2		✓				✓	
EW2105020-010	10-Nov-2021 00:00	A11/TP2-0.2		✓				✓	
EW2105020-011	20-Nov-2021 00:00	A12/SP1-1		✓				✓	
EW2105020-012	19-Nov-2021 00:00	A14/TP1-0.1		✓				✓	
EW2105020-013	19-Nov-2021 00:00	A14/TP1-0.6	✓						
EW2105020-014	19-Nov-2021 00:00	A14/TP3-0.2		✓				✓	
EW2105020-015	19-Nov-2021 00:00	A15/TP1-0.2		✓				✓	
EW2105020-016	19-Nov-2021 00:00	A15/TP2-0.2		✓				✓	
EW2105020-017	19-Nov-2021 00:00	A15/TP3-0.2		✓				✓	
EW2105020-018	19-Nov-2021 00:00	A15/TP4-0.2		✓				✓	
EW2105020-019	19-Nov-2021 00:00	A15/TP5-0.2		✓				✓	
EW2105020-020	19-Nov-2021 00:00	A15/TP6-0.2		✓				✓	
EW2105020-021	20-Nov-2021 00:00	A16/TP1-0.2		✓				✓	
EW2105020-022	20-Nov-2021 00:00	A17/TP1-0.2		✓				✓	
EW2105020-023	20-Nov-2021 00:00	A17/SP1-1		✓				✓	
EW2105020-024	19-Nov-2021 00:00	A18/TP1-0.2		✓				✓	
EW2105020-025	19-Nov-2021 00:00	A18/DUP2-0.2		✓					✓
EW2105020-026	19-Nov-2021 00:00	A18/TP2-0.4		✓				✓	
EW2105020-027	19-Nov-2021 00:00	A18/TP2-1.4	✓						
EW2105020-028	19-Nov-2021 00:00	A18/TP4-0.6		✓				✓	
EW2105020-029	19-Nov-2021 00:00	A19/TP2-0.1		✓	✓	✓			
EW2105020-030	19-Nov-2021 00:00	A19/TP2-0.3		✓				✓	
EW2105020-031	19-Nov-2021 00:00	A19/TP4-0.1		✓	✓	✓			
EW2105020-032	19-Nov-2021 00:00	A19/TP4-0.2		✓				✓	
EW2105020-033	19-Nov-2021 00:00	A19/TP4-0.6	✓						
EW2105020-034	19-Nov-2021 00:00	A20/TP1-0.2		✓				✓	
EW2105020-035	19-Nov-2021 00:00	A20/TP2-0.2		✓				✓	

			(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - MM804 Thermotolerant Coliforms & E.coli by MPN	SOIL - MM823 Salmonella (absence / presence)	SOIL - NT-2S Major Anions (Cl, SO4)	SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EW2105020-036	19-Nov-2021 00:00	A20/TP3-0.2		✓				✓	
EW2105020-037	19-Nov-2021 00:00	A20/TP3-0.8	✓						
EW2105020-038	20-Nov-2021 00:00	A22/TP1-0.2		✓				✓	
EW2105020-039	20-Nov-2021 00:00	A23/TP1-0.3		✓				✓	
EW2105020-040	20-Nov-2021 00:00	A23/DUP3-0.3		✓					✓
EW2105020-041	20-Nov-2021 00:00	A24/TP1-0.2		✓				✓	
EW2105020-042	20-Nov-2021 00:00	A25/TP1-0.5		✓	✓	✓		✓	
EW2105020-043	20-Nov-2021 00:00	A25/TP3-0.5		✓	✓	✓		✓	
EW2105020-044	20-Nov-2021 00:00	A28/TP1-0.1		✓	✓	✓			
EW2105020-045	20-Nov-2021 00:00	A28/TP1-0.2		✓			✓	✓	
EW2105020-046	20-Nov-2021 00:00	A28/TP5-0.1	✓						
EW2105020-047	20-Nov-2021 00:00	A28/TP5-0.3		✓			✓	✓	
EW2105020-048	20-Nov-2021 00:00	A28/TP5-0.7	✓						
EW2105020-049	19-Nov-2021 00:00	A29/TP1-0.1		✓	✓	✓			
EW2105020-050	19-Nov-2021 00:00	A29/TP1-0.2		✓				✓	
EW2105020-051	19-Nov-2021 00:00	A29/TP2-0.1		✓	✓	✓			
EW2105020-052	19-Nov-2021 00:00	A29/TP2-0.2		✓				✓	
EW2105020-053	19-Nov-2021 00:00	A29/TP2-0.6		✓				✓	
EW2105020-054	20-Nov-2021 00:00	A30/TP2-0.2		✓				✓	
EW2105020-055	19-Nov-2021 00:00	A31/TP1-0.2		✓				✓	
EW2105020-056	20-Nov-2021 00:00	A32/TP1-0.2		✓				✓	
EW2105020-057	20-Nov-2021 00:00	A32/DUP4-0.2		✓					✓
EW2105020-058	20-Nov-2021 00:00	A32/TP2-0.2		✓				✓	
EW2105020-059	20-Nov-2021 00:00	A32/TP3-0.2		✓				✓	
EW2105020-060	20-Nov-2021 00:00	A32/TP4-0.2		✓				✓	
EW2105020-061	20-Nov-2021 00:00	A32/TP5-0.2		✓				✓	
EW2105020-062	20-Nov-2021 00:00	A32/TP6/0.2		✓				✓	
EW2105020-063	20-Nov-2021 00:00	A32/TP7/0.2		✓				✓	
EW2105020-064	10-Nov-2021 00:00	A32/TP8-0.2		✓				✓	
EW2105020-065	10-Nov-2021 00:00	A32/TP9-0.2		✓				✓	
EW2105020-066	10-Nov-2021 00:00	A32/DUP5-0.2		✓					✓
EW2105020-067	19-Nov-2021 00:00	A34/TP1-0.1		✓				✓	
EW2105020-068	19-Nov-2021 00:00	A34/TP1/0.5	✓						
EW2105020-069	19-Nov-2021 00:00	A34/TP2-0.1		✓				✓	
EW2105020-070	19-Nov-2021 00:00	A34/TP3-0.2		✓				✓	
EW2105020-071	19-Nov-2021 00:00	A34/TP3-0.8	✓						
EW2105020-072	19-Nov-2021 00:00	A34/TP4-0.2		✓				✓	
EW2105020-073	19-Nov-2021 00:00	A34/TP4-0.5	✓						
EW2105020-074	20-Nov-2021 00:00	A35/TP2-0.2		✓				✓	
EW2105020-075	20-Nov-2021 00:00	A35/TP3-0.2		✓				✓	
EW2105020-076	20-Nov-2021 00:00	A36/SP1-1		✓				✓	

			(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - MM804 Thermotolerant Coliforms & E.coli by MPN	SOIL - MM823 Salmonella (absence / presence)	SOIL - NT-2S Major Anions (Cl, SO4)	SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EW2105020-077	20-Nov-2021 00:00	A36/SP1-2		✓				✓	

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOIL - AG-2 Agricultural Soil Suite 2
EW2105020-045	20-Nov-2021 00:00	A28/TP1-0.2	✓
EW2105020-047	20-Nov-2021 00:00	A28/TP5-0.3	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
MM804: Thermotolerant Coliforms & E.coli by MPN							
A19/TP2-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A19/TP4-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A29/TP1-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A29/TP2-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
MM823: Salmonella (absence / presence)							
A19/TP2-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A19/TP4-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A29/TP1-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----
A29/TP2-0.1	Sterile Plastic Jar	----	23-Nov-2021	24-Nov-2021	×	----	----

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au

QUALITY CONTROL REPORT

Work Order	: **EW2105020**	Page	: 1 of 41
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Project	: ENRS2069	Date Samples Received	: 24-Nov-2021
Order number	: ENRS2069	Date Analysis Commenced	: 26-Nov-2021
C-O-C number	: ----	Issue Date	: 02-Dec-2021
Sampler	: ----		
Site	: 48 Campbell St - DSI		
Quote number	: WO/001/21		
No. of samples received	: 77		
No. of samples analysed	: 69		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
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
Uma Nagendiram	Subcontracting Coordinator	WRG Subcontracting, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, 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

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: 4043860)									
EW2105020-005	A9/TP1-0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	32	33	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	13	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	17	17	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	110	104	5.4	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	198	191	3.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	311	318	2.2	0% - 20%
EW2105020-011	A12/SP1-1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	11	18	45.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	9	14.6	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	119	112	6.4	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	106	127	17.6	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	149	153	3.1	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4043862)									
EW2105020-022	A17/TP1-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	27	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	14	14	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	72	71	0.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	29	29	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	53	53	0.0	0% - 50%
EW2105020-036	A20/TP3-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	21	0.0	0% - 50%

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: 4043862) - continued									
EW2105020-036	A20/TP3-0.2	EG005T: Nickel	7440-02-0	2	mg/kg	14	13	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	124	118	5.7	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	101	117	14.3	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	228	251	9.5	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4044180)									
EW2105020-052	A29/TP2-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	15	8.9	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	9	9	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	74	71	3.3	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	39	32	18.2	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	319	305	4.3	0% - 20%
EW2105020-062	A32/TP6/0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	29	31	5.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	11	13.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	63	70	11.6	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	28	22	22.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	32	34	6.4	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4044182)									
EW2105020-075	A35/TP3-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	15	13	14.5	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	90	87	3.1	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	39	39	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	21	23	10.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	119	139	15.2	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	425	# 525	21.0	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	13700	15200	10.3	0% - 20%
EA002: pH 1:5 (Soils) (QC Lot: 4039036)									
ES2142177-005	Anonymous	EA002: pH Value	----	0.1	pH Unit	6.0	5.9	0.0	0% - 20%
EA010: Conductivity (1:5) (QC Lot: 4039035)									
ES2142177-005	Anonymous	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	322	356	10.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4043864)									
EW2105020-003	A6/TP1-0.1	EA055: Moisture Content	----	0.1	%	32.0	29.9	6.7	0% - 20%
EW2105020-015	A15/TP1-0.2	EA055: Moisture Content	----	0.1	%	26.7	27.4	2.5	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4043865)									
EW2105020-024	A18/TP1-0.2	EA055: Moisture Content	----	0.1	%	6.1	5.3	14.0	No Limit
EW2105020-040	A23/DUP3-0.3	EA055: Moisture Content	----	0.1	%	5.4	5.8	6.2	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4044183)									

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 (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4044183) - continued									
EW2105020-054	A30/TP2-0.2	EA055: Moisture Content	----	0.1	%	25.0	25.5	1.9	0% - 20%
EW2105020-065	A32/TP9-0.2	EA055: Moisture Content	----	0.1	%	32.2	31.9	0.8	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4044184)									
EW2105020-077	A36/SP1-2	EA055: Moisture Content	----	0.1	%	29.6	30.7	3.8	0% - 20%
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 4047566)									
EW2105020-045	A28/TP1-0.2	ED006: Calcium/Magnesium Ratio	----	0.1	-	3.8	4.1	6.7	0% - 20%
		ED006: Exchangeable Sodium Percent	----	0.2	%	7.9	8.2	3.3	0% - 20%
		ED006: Exchangeable Calcium	----	0.2	meq/100g	9.3	9.1	2.1	0% - 20%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	2.4	2.2	8.9	0% - 50%
		ED006: Exchangeable Potassium	----	0.2	meq/100g	3.1	3.1	0.0	0% - 50%
		ED006: Exchangeable Sodium	----	0.2	meq/100g	1.3	1.3	0.0	No Limit
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	16.1	15.7	2.6	0% - 20%
		ED006: Exchangeable Aluminium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
ED040S: Soluble Major Anions (QC Lot: 4039032)									
ES2142177-008	Anonymous	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	30	30	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 4039031)									
ES2142177-005	Anonymous	ED045G: Chloride	16887-00-6	10	mg/kg	100	100	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4043861)									
EW2105020-005	A9/TP1-0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.1	0.0	No Limit
EW2105020-011	A12/SP1-1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4043863)									
EW2105020-022	A17/TP1-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	15.5	15.6	0.8	0% - 20%
EW2105020-036	A20/TP3-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4044179)									
EW2105020-052	A29/TP2-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4044181)									
EW2105020-075	A35/TP3-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.1	0.0	No Limit
EK055: Ammonia as N (QC Lot: 4039039)									
EW2105020-045	A28/TP1-0.2	EK055: Ammonia as N	7664-41-7	20	mg/kg	<20	<20	0.0	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 4039034)									
ES2142177-005	Anonymous	EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 4039033)									
ES2142177-005	Anonymous	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	1.2	1.2	0.0	0% - 50%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 4038431)									
EW2105020-047	A28/TP5-0.3	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	16200	17400	7.2	0% - 20%
EW2105020-045	A28/TP1-0.2	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	1370	1260	8.7	0% - 20%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 4038430)									

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 (%)*
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 4038430) - continued									
EW2105020-045	A28/TP1-0.2	EK067G: Total Phosphorus as P	----	2	mg/kg	3020	2510	18.5	0% - 20%
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4039634)									
EW2105020-001	A1/TP1-0.3	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EW2105020-011	A12/SP1-1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4039640)									
EW2105020-022	A17/TP1-0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EW2105020-038	A22/TP1-0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4039646)									
EW2105020-052	A29/TP2-0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4039707)									
ES2142470-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039633)									
EW2105020-001	A1/TP1-0.3	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	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
EW2105020-011	A12/SP1-1	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	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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039633) - continued									
EW2105020-011	A12/SP1-1	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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039639)									
EW2105020-022	A17/TP1-0.2	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	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
EW2105020-038	A22/TP1-0.2	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

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 (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039639) - continued									
EW2105020-038	A22/TP1-0.2	EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039649)									
EW2105020-052	A29/TP2-0.2	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	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

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 (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039649) - continued									
EW2105020-052	A29/TP2-0.2	EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EW2105020-062	A32/TP6/0.2	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	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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039706)									
ES2142470-001	Anonymous	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	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

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 (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4039706) - continued									
ES2142470-001	Anonymous	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039633)									
EW2105020-001	A1/TP1-0.3	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EW2105020-011	A12/SP1-1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	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 (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039633) - continued									
EW2105020-011	A12/SP1-1	EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039639)									
EW2105020-022	A17/TP1-0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EW2105020-038	A22/TP1-0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	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 (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039639) - continued									
EW2105020-038	A22/TP1-0.2	EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039649)									
EW2105020-052	A29/TP2-0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	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 (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039649) - continued									
EW2105020-062	A32/TP6/0.2	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4039706)									
ES2142470-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4039632)									
EW2105020-001	A1/TP1-0.3	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EW2105020-011	A12/SP1-1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	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)A: Phenolic Compounds (QC Lot: 4039632) - continued									
EW2105020-011	A12/SP1-1	EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4039638)									
EW2105020-022	A17/TP1-0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EW2105020-038	A22/TP1-0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4039648)									
EW2105020-052	A29/TP2-0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.8	<0.8	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)A: Phenolic Compounds (QC Lot: 4039648) - continued									
EW2105020-052	A29/TP2-0.2	EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<2	<2	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4039705)									
ES2142532-005	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2142470-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 4039705) - continued									
ES2142470-001	Anonymous	EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4039632)									
EW2105020-001	A1/TP1-0.3	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	205-99-2 205-82-3	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
		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
EW2105020-011	A12/SP1-1	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	205-99-2 205-82-3	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
		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

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: 4039632) - continued									
EW2105020-011	A12/SP1-1	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4039638)									
EW2105020-022	A17/TP1-0.2	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	205-99-2 205-82-3	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
		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
EW2105020-038	A22/TP1-0.2	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	205-99-2 205-82-3	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
		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

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: 4039638) - continued									
EW2105020-038	A22/TP1-0.2	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4039648)									
EW2105020-052	A29/TP2-0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	1.1	<0.8	30.5	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	1.3	0.9	34.7	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.8	<0.8	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	2.4	0.9	90.9	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EW2105020-062	A32/TP6/0.2	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	205-99-2 205-82-3	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
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	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: 4039648) - continued									
EW2105020-062	A32/TP6/0.2	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4039705)									
ES2142532-005	Anonymous	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	205-99-2 205-82-3	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
		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
ES2142470-001	Anonymous	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	205-99-2 205-82-3	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: 4039705) - continued									
ES2142470-001	Anonymous	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: 4038567)									
EW2105020-001	A1/TP1-0.3	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-011	A12/SP1-1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4038573)									
EW2105020-022	A17/TP1-0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-036	A20/TP3-0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4038574)									
EW2105020-052	A29/TP2-0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4039631)									
EW2105020-001	A1/TP1-0.3	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
EW2105020-011	A12/SP1-1	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: 4039637)									
EW2105020-022	A17/TP1-0.2	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
EW2105020-038	A22/TP1-0.2	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: 4039647)									
EW2105020-052	A29/TP2-0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	110	110	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EW2105020-062	A32/TP6/0.2	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: 4039704)									
ES2142532-005	Anonymous	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

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 (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4039704) - continued									
ES2142532-005	Anonymous	EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2142470-001	Anonymous	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: 4041924)									
ES2142532-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2142692-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4038567)									
EW2105020-001	A1/TP1-0.3	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-011	A12/SP1-1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4038573)									
EW2105020-022	A17/TP1-0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-036	A20/TP3-0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4038574)									
EW2105020-052	A29/TP2-0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EW2105020-062	A32/TP6/0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4039631)									
EW2105020-001	A1/TP1-0.3	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
EW2105020-011	A12/SP1-1	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: 4039637)									
EW2105020-022	A17/TP1-0.2	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
EW2105020-038	A22/TP1-0.2	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: 4039647)									
EW2105020-052	A29/TP2-0.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	150	160	7.1	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
EW2105020-062	A32/TP6/0.2	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: 4039704)									
ES2142532-005	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	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 (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4039704) - continued									
ES2142532-005	Anonymous	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
ES2142470-001	Anonymous	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: 4041924)									
ES2142532-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2142692-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4038567)									
EW2105020-001	A1/TP1-0.3	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EW2105020-011	A12/SP1-1	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EP080: BTEXN (QC Lot: 4038573)									
EW2105020-022	A17/TP1-0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EW2105020-036	A20/TP3-0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EP080: BTEXN (QC Lot: 4038574)									
EW2105020-052	A29/TP2-0.2	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	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 (%)*
EP080: BTEXN (QC Lot: 4038574) - continued									
EW2105020-052	A29/TP2-0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EW2105020-062	A32/TP6/0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EP080: BTEXN (QC Lot: 4041924)									
ES2142532-001	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
ES2142692-001	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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: 4043860)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	102	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	83.8	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	113	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	101	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	97.9	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	101	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	87.6	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4043862)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	108	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	93.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	113	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	112	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	101	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	90.2	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4044180)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	105	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	93.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	116	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	106	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	101	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	102	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	86.5	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4044182)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	109	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	103	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	118	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	106	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	104	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	88.7	66.0	133
EA010: Conductivity (1:5) (QCLot: 4039035)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1412 µS/cm	100	92.0	108
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 4047566)								

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
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 4047566) - continued								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	2.5 meq/100g	98.0	80.0	110
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	4.17 meq/100g	101	80.0	110
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	1.28 meq/100g	105	80.0	110
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	2.17 meq/100g	102	80.0	110
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Aluminium	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Calcium/Magnesium Ratio	----	0.1	-	<0.1	----	----	----	----
ED040S: Soluble Major Anions (QCLot: 4039032)								
ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	<10	750 mg/kg	87.7	80.0	120
ED045G: Chloride by Discrete Analyser (QCLot: 4039031)								
ED045G: Chloride	16887-00-6	10	mg/kg	<10	250 mg/kg	96.8	75.0	125
				<10	5000 mg/kg	93.0	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4043861)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	120	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4043863)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	106	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4044179)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	104	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4044181)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	120	70.0	125
EK055: Ammonia as N (QCLot: 4039039)								
EK055: Ammonia as N	7664-41-7	20	mg/kg	<20	125 mg/kg	102	84.0	104
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4039034)								
EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	2.5 mg/kg	101	85.0	111
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4039033)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	98.5	88.0	118
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 4038431)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	1000 mg/kg	85.1	72.0	106
				<20	100 mg/kg	88.6	70.0	122
				<20	500 mg/kg	87.7	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 4038430)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	442 mg/kg	98.8	76.0	108
				<2	44.2 mg/kg	110	70.0	118
				<2	100 mg/kg	103	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039634)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	89.5	62.0	126

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
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039640)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	84.8	62.0	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039646)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	90.6	62.0	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039707)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	86.7	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039633)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	101	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	102	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.2	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.2	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	105	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	97.1	54.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039639)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.5	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	96.4	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	66.0	116

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: 4039639) - continued								
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.7	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.0	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	91.8	54.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039649)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	106	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	100	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	102	54.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039706)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.7	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	65.0	117

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: 4039706) - continued								
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	102	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	106	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	95.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	92.0	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039633)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	77.8	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	83.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	89.2	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	87.6	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	85.9	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.9	41.0	123
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039639)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	75.7	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	62.0	128

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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039639) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	83.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.4	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	90.1	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	88.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	41.0	123
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039649)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	89.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	92.8	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	91.8	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	41.0	123
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039706)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	59.0	119

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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039706) - continued								
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	95.8	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	102	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	95.2	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 4039632)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	107	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	105	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	106	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	115	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	84.5	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	96.3	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	95.4	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	99.5	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	94.9	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	91.9	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	89.2	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	46.4	10.0	57.0
EP075(SIM)A: Phenolic Compounds (QCLot: 4039638)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	90.2	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	91.8	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	91.1	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	90.2	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	89.6	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	89.0	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.2	66.0	120

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
EP075(SIM)A: Phenolic Compounds (QCLot: 4039638) - continued								
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	91.0	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.2	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	78.3	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	80.1	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	31.3	10.0	57.0
EP075(SIM)A: Phenolic Compounds (QCLot: 4039648)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	92.8	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	93.3	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	92.3	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	98.0	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	66.0	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	86.3	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.1	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	88.8	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	81.4	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.0	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	80.7	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	34.0	10.0	57.0
EP075(SIM)A: Phenolic Compounds (QCLot: 4039705)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	97.6	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	107	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	116	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	84.7	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	93.4	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	93.3	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	98.7	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.8	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	92.9	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	94.0	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	56.2	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039632)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	112	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	105	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	109	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	114	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	127

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039632) - continued								
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	114	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	112	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	102	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	108	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	101	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	88.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	93.9	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	92.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	91.6	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039638)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.3	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	90.1	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	96.6	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	105	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.3	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	102	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.1	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	90.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	98.5	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	83.2	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	114	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	90.7	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	99.1	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	95.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	99.0	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039648)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	102	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	87.6	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.8	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	98.9	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	104	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	94.4	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	100	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	91.2	69.0	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039648) - continued								
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	100	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	88.7	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	99.0	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	82.4	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	91.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	91.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	90.0	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039705)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.4	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	98.6	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	110	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	111	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.9	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	98.7	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	96.6	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	90.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	101	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	99.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	95.5	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038567)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	107	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038573)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	104	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038574)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	100	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039631)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	99.3	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	99.5	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	99.3	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039637)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	89.3	75.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039637) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.1	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	92.3	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039647)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	99.2	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	99.8	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	96.3	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039704)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	91.4	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	87.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	88.3	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4041924)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038567)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	108	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038573)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	104	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038574)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	98.2	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039631)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	101	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.2	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	98.2	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039637)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	96.0	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.4	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	93.9	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039647)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	100	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.0	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	95.3	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039704)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	89.2	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	87.6	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	93.9	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4041924)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	100	68.4	128
EP080: BTEXN (QCLot: 4038567)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 4038567) - continued								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	102	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	104	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	107	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	107	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	90.3	63.0	119
EP080: BTEXN (QCLot: 4038573)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	102	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	97.8	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	90.8	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.0	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	94.6	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	100.0	63.0	119
EP080: BTEXN (QCLot: 4038574)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	107	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	104	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	104	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	104	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	106	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	105	63.0	119
EP080: BTEXN (QCLot: 4041924)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	85.4	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.1	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	89.1	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.1	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	84.3	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	85.8	63.0	119

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

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4043860)							
EW2105020-005	A9/TP1-0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	89.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	90.5	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	84.2	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	92.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	86.0	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4043862)							
EW2105020-022	A17/TP1-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	82.8	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.4	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	97.0	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	93.9	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	93.2	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	92.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	87.3	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4044180)							
EW2105020-052	A29/TP2-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.5	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	100	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	82.3	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4044182)							
EW2105020-075	A35/TP3-0.2	EG005T: Arsenic	7440-38-2	50 mg/kg	90.1	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	84.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	71.4	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	102	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	111	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	83.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	# Not Determined	66.0	133
ED045G: Chloride by Discrete Analyser (QCLot: 4039031)							
ES2142177-005	Anonymous	ED045G: Chloride	16887-00-6	250 mg/kg	108	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4043861)							
EW2105020-005	A9/TP1-0.1	EG035T: Mercury	7439-97-6	5 mg/kg	90.5	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4043863)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4043863) - continued							
EW2105020-022	A17/TP1-0.2	EG035T: Mercury	7439-97-6	5 mg/kg	111	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4044179)							
EW2105020-052	A29/TP2-0.2	EG035T: Mercury	7439-97-6	5 mg/kg	125	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4044181)							
EW2105020-075	A35/TP3-0.2	EG035T: Mercury	7439-97-6	5 mg/kg	120	70.0	130
EK055: Ammonia as N (QCLot: 4039039)							
EW2105020-047	A28/TP5-0.3	EK055: Ammonia as N	7664-41-7	125 mg/kg	103	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4039034)							
ES2142177-005	Anonymous	EK057G: Nitrite as N (Sol.)	14797-65-0	2.5 mg/kg	113	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4039033)							
ES2142177-005	Anonymous	EK059G: Nitrite + Nitrate as N (Sol.)	----	2.5 mg/kg	85.1	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 4038431)							
EW2105020-045	A28/TP1-0.2	EK061G: Total Kjeldahl Nitrogen as N	----	500 mg/kg	# Not Determined	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 4038430)							
EW2105020-045	A28/TP1-0.2	EK067G: Total Phosphorus as P	----	100 mg/kg	# Not Determined	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039634)							
EW2105020-001	A1/TP1-0.3	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	86.5	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039640)							
EW2105020-022	A17/TP1-0.2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	116	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039646)							
EW2105020-052	A29/TP2-0.2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	99.9	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4039707)							
ES2142470-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	99.3	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039633)							
EW2105020-001	A1/TP1-0.3	EP068: gamma-BHC	58-89-9	0.5 mg/kg	79.4	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	76.7	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	89.0	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	91.7	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	91.2	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	85.0	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039639)							
EW2105020-022	A17/TP1-0.2	EP068: gamma-BHC	58-89-9	0.5 mg/kg	101	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
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039639) - continued							
EW2105020-022	A17/TP1-0.2	EP068: Heptachlor	76-44-8	0.5 mg/kg	99.4	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	99.0	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	85.7	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	91.8	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	83.0	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039649)							
EW2105020-052	A29/TP2-0.2	EP068: gamma-BHC	58-89-9	0.5 mg/kg	91.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	96.1	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	77.4	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	78.3	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	95.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	79.9	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039706)							
ES2142470-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	90.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	87.2	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	92.0	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	88.4	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	87.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	82.1	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039633)							
EW2105020-001	A1/TP1-0.3	EP068: Diazinon	333-41-5	0.5 mg/kg	90.4	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	79.2	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	81.0	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.8	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	76.2	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039639)							
EW2105020-022	A17/TP1-0.2	EP068: Diazinon	333-41-5	0.5 mg/kg	108	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	94.8	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	94.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	94.1	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	91.2	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039649)							
EW2105020-052	A29/TP2-0.2	EP068: Diazinon	333-41-5	0.5 mg/kg	103	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.9	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	80.5	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	81.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	78.4	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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039706)							
ES2142470-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	99.6	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	86.9	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	87.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	85.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	81.1	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4039632)							
EW2105020-001	A1/TP1-0.3	EP075(SIM): Phenol	108-95-2	10 mg/kg	104	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	106	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	89.2	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	98.6	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	90.7	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4039638)							
EW2105020-022	A17/TP1-0.2	EP075(SIM): Phenol	108-95-2	10 mg/kg	80.9	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	86.4	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	89.6	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	82.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	66.6	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4039648)							
EW2105020-052	A29/TP2-0.2	EP075(SIM): Phenol	108-95-2	10 mg/kg	97.9	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	99.5	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	80.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	96.7	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	60.2	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4039705)							
ES2142470-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	98.9	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	105	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	84.9	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	96.0	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	91.2	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039632)							
EW2105020-001	A1/TP1-0.3	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	103	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	114	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039638)							
EW2105020-022	A17/TP1-0.2	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	92.4	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	98.6	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039648)							
EW2105020-052	A29/TP2-0.2	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039648) - continued							
EW2105020-052	A29/TP2-0.2	EP075(SIM): Pyrene	129-00-0	10 mg/kg	110	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039705)							
ES2142470-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	99.9	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	115	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038567)							
EW2105020-001	A1/TP1-0.3	EP080: C6 - C9 Fraction	----	32.5 mg/kg	126	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038573)							
EW2105020-022	A17/TP1-0.2	EP080: C6 - C9 Fraction	----	32.5 mg/kg	106	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4038574)							
EW2105020-052	A29/TP2-0.2	EP080: C6 - C9 Fraction	----	32.5 mg/kg	98.0	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039631)							
EW2105020-001	A1/TP1-0.3	EP071: C10 - C14 Fraction	----	480 mg/kg	98.8	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	105	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	107	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039637)							
EW2105020-022	A17/TP1-0.2	EP071: C10 - C14 Fraction	----	480 mg/kg	106	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	105	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	108	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039647)							
EW2105020-052	A29/TP2-0.2	EP071: C10 - C14 Fraction	----	480 mg/kg	89.8	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	98.5	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	101	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039704)							
ES2142470-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	81.7	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	88.6	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	91.2	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4041924)							
ES2142532-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	110	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038567)							
EW2105020-001	A1/TP1-0.3	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	125	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038573)							
EW2105020-022	A17/TP1-0.2	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4038574)							
EW2105020-052	A29/TP2-0.2	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	96.6	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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039631)							
EW2105020-001	A1/TP1-0.3	EP071: >C10 - C16 Fraction	----	860 mg/kg	93.3	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	106	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	109	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039637)							
EW2105020-022	A17/TP1-0.2	EP071: >C10 - C16 Fraction	----	860 mg/kg	107	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	107	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	102	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039647)							
EW2105020-052	A29/TP2-0.2	EP071: >C10 - C16 Fraction	----	860 mg/kg	83.5	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	100	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	100	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039704)							
ES2142470-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	77.9	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	89.8	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	93.1	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4041924)							
ES2142532-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	112	70.0	130
EP080: BTEXN (QCLot: 4038567)							
EW2105020-001	A1/TP1-0.3	EP080: Benzene	71-43-2	2.5 mg/kg	106	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	108	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	112	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	111	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	112	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.4	70.0	130
EP080: BTEXN (QCLot: 4038573)							
EW2105020-022	A17/TP1-0.2	EP080: Benzene	71-43-2	2.5 mg/kg	95.2	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	92.3	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	91.2	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	91.5	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	95.1	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	93.5	70.0	130
EP080: BTEXN (QCLot: 4038574)							
EW2105020-052	A29/TP2-0.2	EP080: Benzene	71-43-2	2.5 mg/kg	84.9	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	84.6	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	87.7	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: BTEXN (QCLot: 4038574) - continued							
EW2105020-052	A29/TP2-0.2	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	85.8	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	86.7	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	76.4	70.0	130
EP080: BTEXN (QCLot: 4041924)							
ES2142532-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	88.6	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	93.5	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	103	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	102	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	104	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	82.6	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EW2105020**	Page	: 1 of 26
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Telephone	: 02 42253125
Project	: ENRS2069	Date Samples Received	: 24-Nov-2021
Site	: 48 Campbell St - DSI	Issue Date	: 02-Dec-2021
Sampler	: ----	No. of samples received	: 77
Order number	: ENRS2069	No. of samples analysed	: 69

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 Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005(ED093)T: Total Metals by ICP-AES	EW2105020--075	A35/TP3-0.2	**Lead**	7439-92-1	21.0 %	0% - 20%	**RPD exceeds LOR based limits**
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	EW2105020--075	A35/TP3-0.2	**Zinc**	7440-66-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EK067G: Total Phosphorus as P by Discrete Analyser	EW2105020--045	A28/TP1-0.2	**Total Phosphorus as P**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	----	----	----	29-Nov-2021	24-Nov-2021	**5**
A10/TP1-0.2,	A10/DUP1-0.2,						
A10/TP2-0.2,	A11/TP1-0.2,						
A11/TP2-0.2,	A32/TP8-0.2,						
A32/TP9-0.2,	A32/DUP5-0.2						
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	26-Nov-2021	24-Nov-2021	**2**	----	----	----
A10/TP1-0.2,	A10/TP2-0.2,						
A11/TP1-0.2,	A11/TP2-0.2						
Soil Glass Jar - Unpreserved							
A32/TP8-0.2,	A32/TP9-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	26-Nov-2021	24-Nov-2021	**2**	----	----	----
A10/TP1-0.2,	A10/TP2-0.2,						
A11/TP1-0.2,	A11/TP2-0.2						
Soil Glass Jar - Unpreserved							
A32/TP8-0.2,	A32/TP9-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	26-Nov-2021	24-Nov-2021	**2**	----	----	----
A10/TP1-0.2,	A10/TP2-0.2,						
A11/TP1-0.2,	A11/TP2-0.2						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP068B: Organophosphorus Pesticides (OP) - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
A32/TP8-0.2, A32/TP9-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP075(SIM)A: Phenolic Compounds						
Soil Glass Jar - Unpreserved						
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2	26-Nov-2021	24-Nov-2021	**2**	----	----	----
Soil Glass Jar - Unpreserved						
A32/TP8-0.2, A32/TP9-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/DUP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2	26-Nov-2021	24-Nov-2021	**2**	----	----	----
Soil Glass Jar - Unpreserved						
A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Soil Glass Jar - Unpreserved						
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/DUP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2, A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	26-Nov-2021	24-Nov-2021	**2**	29-Nov-2021	24-Nov-2021	**5**
Soil Glass Jar - Unpreserved						
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/DUP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2	26-Nov-2021	24-Nov-2021	**2**	30-Nov-2021	24-Nov-2021	**6**
Soil Glass Jar - Unpreserved						
A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	29-Nov-2021	24-Nov-2021	**5**	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved						
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/DUP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2, A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	26-Nov-2021	24-Nov-2021	**2**	29-Nov-2021	24-Nov-2021	**5**

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Analysis Holding Time							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	26-Nov-2021	24-Nov-2021	**2**	30-Nov-2021	24-Nov-2021	**6**
A10/TP1-0.2,	A10/DUP1-0.2,						
A10/TP2-0.2,	A11/TP1-0.2,						
A11/TP2-0.2							
Soil Glass Jar - Unpreserved							
A32/TP8-0.2,	A32/TP9-0.2,	29-Nov-2021	24-Nov-2021	**5**	----	----	----
A32/DUP5-0.2							
EP080: BTEXN							
Soil Glass Jar - Unpreserved							
A32/TP8-0.2,	A32/TP9-0.2,	26-Nov-2021	24-Nov-2021	**2**	29-Nov-2021	24-Nov-2021	**5**
A32/DUP5-0.2							
Soil Glass Jar - Unpreserved							
A7-8/SP1,	A9/TP1-0.1,	26-Nov-2021	24-Nov-2021	**2**	30-Nov-2021	24-Nov-2021	**6**
A10/TP1-0.2,	A10/DUP1-0.2,						
A10/TP2-0.2,	A11/TP1-0.2,						
A11/TP2-0.2							
MM823: Salmonella (absence / presence)							
Sterile Plastic Jar							
A19/TP2-0.1,	A19/TP4-0.1,	----	----	----	26-Nov-2021	23-Nov-2021	**3**
A29/TP1-0.1,	A29/TP2-0.1						
Sterile Plastic Jar							
A25/TP1-0.5,	A25/TP3-0.5,	----	----	----	26-Nov-2021	24-Nov-2021	**2**
A28/TP1-0.1,	A28/TP5-0.1						
MM869: E.coli and Thermotolerant Coliforms by MPN							
Sterile Plastic Jar							
A19/TP2-0.1,	A19/TP4-0.1,	----	----	----	26-Nov-2021	23-Nov-2021	**3**
A29/TP1-0.1,	A29/TP2-0.1						
Sterile Plastic Jar							
A25/TP1-0.5,	A25/TP3-0.5,	----	----	----	26-Nov-2021	24-Nov-2021	**2**
A28/TP1-0.1,	A28/TP5-0.1						

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
EA002: pH 1:5 (Soils)								
Soil Glass Jar - Unpreserved (EA002)								
A28/TP1-0.2,	A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	27-Nov-2021	✓	**26-Nov-2021**	26-Nov-2021	✓
EA010: Conductivity (1:5)								
Soil Glass Jar - Unpreserved (EA010)								
A28/TP1-0.2,	A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	27-Nov-2021	✓	**26-Nov-2021**	24-Dec-2021	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**----**	----	----	**29-Nov-2021**	24-Nov-2021	×
A10/TP1-0.2,	A10/DUP1-0.2,							
A10/TP2-0.2,	A11/TP1-0.2,							
A11/TP2-0.2,	A32/TP8-0.2,							
A32/TP9-0.2,	A32/DUP5-0.2							
Soil Glass Jar - Unpreserved (EA055)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**----**	----	----	**29-Nov-2021**	03-Dec-2021	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2,							
A18/TP1-0.2,	A18/DUP2-0.2,							
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2,							
A29/TP2-0.2,	A29/TP2-0.6,							
A31/TP1-0.2,	A34/TP1-0.1,							
A34/TP2-0.1,	A34/TP3-0.2,							
A34/TP4-0.2								
Soil Glass Jar - Unpreserved (EA055)								

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) - Continued							
A1/TP1-0.3, A4/TP1-0.3, A6/TP1-0.1, A12/SP1-1, A16/TP1-0.2, A17/TP1-0.2, A17/SP1-1, A22/TP1-0.2, A23/TP1-0.3, A23/DUP3-0.3, A24/TP1-0.2, A25/TP1-0.5, A25/TP3-0.5, A28/TP1-0.2, A28/TP5-0.3, A30/TP2-0.2, A32/TP1-0.2, A32/DUP4-0.2, A32/TP2-0.2, A36/SP1-1, A32/TP3-0.2, A32/TP4-0.2, A32/TP5-0.2, A32/TP6/0.2, A32/TP7/0.2, A35/TP2-0.2, A35/TP3-0.2, A36/SP1-2	**20-Nov-2021**	**----**	----	----	**29-Nov-2021**	04-Dec-2021	✓
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**01-Dec-2021**	18-Dec-2021	✓	**01-Dec-2021**	18-Dec-2021	✓
ED040S : Soluble Sulfate by ICPAES							
Soil Glass Jar - Unpreserved (ED040S)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	18-Dec-2021	✓	**26-Nov-2021**	24-Dec-2021	✓
ED045G: Chloride by Discrete Analyser							
Soil Glass Jar - Unpreserved (ED045G)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	18-Dec-2021	✓	**26-Nov-2021**	24-Dec-2021	✓

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
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
A7-8/SP1, A9/TP1-0.1, A10/TP1-0.2, A10/DUP1-0.2, A10/TP2-0.2, A11/TP1-0.2, A11/TP2-0.2, A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	**10-Nov-2021**	**29-Nov-2021**	09-May-2022	✓	**30-Nov-2021**	09-May-2022	✓
Soil Glass Jar - Unpreserved (EG005T)							
A14/TP1-0.1, A14/TP3-0.2, A15/TP1-0.2, A15/TP2-0.2, A15/TP3-0.2, A15/TP4-0.2, A15/TP5-0.2, A15/TP6-0.2, A18/TP1-0.2, A18/DUP2-0.2, A18/TP2-0.4, A18/TP4-0.6, A19/TP2-0.3, A19/TP4-0.2, A20/TP1-0.2, A20/TP2-0.2, A20/TP3-0.2, A29/TP1-0.2, A29/TP2-0.2, A29/TP2-0.6, A31/TP1-0.2, A34/TP1-0.1, A34/TP2-0.1, A34/TP3-0.2, A34/TP4-0.2	**19-Nov-2021**	**29-Nov-2021**	18-May-2022	✓	**30-Nov-2021**	18-May-2022	✓
Soil Glass Jar - Unpreserved (EG005T)							
A1/TP1-0.3, A4/TP1-0.3, A6/TP1-0.1, A12/SP1-1, A16/TP1-0.2, A17/TP1-0.2, A17/SP1-1, A22/TP1-0.2, A23/TP1-0.3, A23/DUP3-0.3, A24/TP1-0.2, A25/TP1-0.5, A25/TP3-0.5, A28/TP1-0.2, A28/TP5-0.3, A30/TP2-0.2, A32/TP1-0.2, A32/DUP4-0.2, A32/TP2-0.2, A36/SP1-1, A32/TP3-0.2, A32/TP4-0.2, A32/TP5-0.2, A32/TP6/0.2, A32/TP7/0.2, A35/TP2-0.2, A35/TP3-0.2, A36/SP1-2	**20-Nov-2021**	**29-Nov-2021**	19-May-2022	✓	**30-Nov-2021**	19-May-2022	✓

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
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**29-Nov-2021**	08-Dec-2021	✓	**30-Nov-2021**	08-Dec-2021	✓
A10/TP1-0.2,	A10/DUP1-0.2,							
A10/TP2-0.2,	A11/TP1-0.2,							
A11/TP2-0.2,	A32/TP8-0.2,							
A32/TP9-0.2,	A32/DUP5-0.2							
Soil Glass Jar - Unpreserved (EG035T)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**29-Nov-2021**	17-Dec-2021	✓	**30-Nov-2021**	17-Dec-2021	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2,							
A18/TP1-0.2,	A18/DUP2-0.2,							
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2,							
A29/TP2-0.2,	A29/TP2-0.6,							
A31/TP1-0.2,	A34/TP1-0.1,							
A34/TP2-0.1,	A34/TP3-0.2,							
A34/TP4-0.2								
Soil Glass Jar - Unpreserved (EG035T)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**29-Nov-2021**	18-Dec-2021	✓	**30-Nov-2021**	18-Dec-2021	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2,	A17/TP1-0.2,							
A17/SP1-1,	A22/TP1-0.2,							
A23/TP1-0.3,	A23/DUP3-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/DUP4-0.2,							
A32/TP2-0.2,	A36/SP1-1, A32/TP3-0.2,							
A32/TP4-0.2,	A32/TP5-0.2,							
A32/TP6/0.2,	A32/TP7/0.2,							
A35/TP2-0.2,	A35/TP3-0.2,							
A36/SP1-2								
EK055: Ammonia as N								
Soil Glass Jar - Unpreserved (EK055)								
A28/TP1-0.2,	A28/TP5-0.3	**20-Nov-2021**	**----**	----	----	**26-Nov-2021**	18-Dec-2021	✓
EK057G: Nitrite as N by Discrete Analyser								
Soil Glass Jar - Unpreserved (EK057G)								
A28/TP1-0.2,	A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	27-Nov-2021	✓	**26-Nov-2021**	28-Nov-2021	✓

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
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK059G)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	18-Dec-2021	✓	**26-Nov-2021**	28-Nov-2021	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Soil Glass Jar - Unpreserved (EK061G)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	18-Dec-2021	✓	**26-Nov-2021**	24-Dec-2021	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK067G)							
A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	18-Dec-2021	✓	**26-Nov-2021**	24-Dec-2021	✓

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
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	05-Jan-2022	✓
A10/TP1-0.2,	A10/TP2-0.2,							
A11/TP1-0.2,	A11/TP2-0.2							
Soil Glass Jar - Unpreserved (EP066)								
A32/TP8-0.2,	A32/TP9-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP066)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2							
Soil Glass Jar - Unpreserved (EP066)								
A18/TP1-0.2,	A18/TP2-0.4,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP4-0.6,	A19/TP2-0.3,							
A19/TP4-0.2,	A20/TP1-0.2,							
A20/TP2-0.2,	A20/TP3-0.2,							
A29/TP1-0.2,	A29/TP2-0.2,							
A29/TP2-0.6,	A31/TP1-0.2,							
A34/TP1-0.1,	A34/TP2-0.1,							
A34/TP3-0.2,	A34/TP4-0.2							
Soil Glass Jar - Unpreserved (EP066)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2								
Soil Glass Jar - Unpreserved (EP066)								
A17/TP1-0.2,	A17/SP1-1,	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A22/TP1-0.2,	A23/TP1-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2,							
A35/TP3-0.2,	A36/SP1-1,							
A36/SP1-2								

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
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	05-Jan-2022	✓
A10/TP1-0.2,	A10/TP2-0.2,							
A11/TP1-0.2,	A11/TP2-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A32/TP8-0.2,	A32/TP9-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP068)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A18/TP1-0.2,	A18/TP2-0.4,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP4-0.6,	A19/TP2-0.3,							
A19/TP4-0.2,	A20/TP1-0.2,							
A20/TP2-0.2,	A20/TP3-0.2,							
A29/TP1-0.2,	A29/TP2-0.2,							
A29/TP2-0.6,	A31/TP1-0.2,							
A34/TP1-0.1,	A34/TP2-0.1,							
A34/TP3-0.2,	A34/TP4-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2								
Soil Glass Jar - Unpreserved (EP068)								
A17/TP1-0.2,	A17/SP1-1,	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A22/TP1-0.2,	A23/TP1-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2,							
A35/TP3-0.2,	A36/SP1-1,							
A36/SP1-2								

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
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	05-Jan-2022	✓
A10/TP1-0.2,	A10/TP2-0.2,							
A11/TP1-0.2,	A11/TP2-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A32/TP8-0.2,	A32/TP9-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP068)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A18/TP1-0.2,	A18/TP2-0.4,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP4-0.6,	A19/TP2-0.3,							
A19/TP4-0.2,	A20/TP1-0.2,							
A20/TP2-0.2,	A20/TP3-0.2,							
A29/TP1-0.2,	A29/TP2-0.2,							
A29/TP2-0.6,	A31/TP1-0.2,							
A34/TP1-0.1,	A34/TP2-0.1,							
A34/TP3-0.2,	A34/TP4-0.2							
Soil Glass Jar - Unpreserved (EP068)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	05-Jan-2022	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2								
Soil Glass Jar - Unpreserved (EP068)								
A17/TP1-0.2,	A17/SP1-1,	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A22/TP1-0.2,	A23/TP1-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2,							
A35/TP3-0.2,	A36/SP1-1,							
A36/SP1-2								

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
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
A10/TP1-0.2,	A10/TP2-0.2,							
A11/TP1-0.2,	A11/TP2-0.2							
Soil Glass Jar - Unpreserved (EP075(SIM))								
A32/TP8-0.2,	A32/TP9-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP075(SIM))								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	05-Jan-2022	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2							
Soil Glass Jar - Unpreserved (EP075(SIM))								
A18/TP1-0.2,	A18/TP2-0.4,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP4-0.6,	A19/TP2-0.3,							
A19/TP4-0.2,	A20/TP1-0.2,							
A20/TP2-0.2,	A20/TP3-0.2,							
A29/TP1-0.2,	A29/TP2-0.2,							
A29/TP2-0.6,	A31/TP1-0.2,							
A34/TP1-0.1,	A34/TP2-0.1,							
A34/TP3-0.2,	A34/TP4-0.2							
Soil Glass Jar - Unpreserved (EP075(SIM))								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	05-Jan-2022	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A17/TP1-0.2,	A17/SP1-1,	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A22/TP1-0.2,	A23/TP1-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2,							
A35/TP3-0.2,	A36/SP1-1,							
A36/SP1-2								

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
A10/TP1-0.2,	A10/DUP1-0.2,							
A10/TP2-0.2,	A11/TP1-0.2,							
A11/TP2-0.2								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A32/TP8-0.2,	A32/TP9-0.2,	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
A32/DUP5-0.2								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	05-Jan-2022	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2							
Soil Glass Jar - Unpreserved (EP075(SIM))								
A18/TP1-0.2,	A18/DUP2-0.2,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2,							
A29/TP2-0.2,	A29/TP2-0.6,							
A31/TP1-0.2,	A34/TP1-0.1,							
A34/TP2-0.1,	A34/TP3-0.2,							
A34/TP4-0.2								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	05-Jan-2022	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2								
Soil Glass Jar - Unpreserved (EP075(SIM))								
A17/TP1-0.2,	A17/SP1-1,	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A22/TP1-0.2,	A23/TP1-0.3,							
A23/DUP3-0.3,	A24/TP1-0.2,							
A25/TP1-0.5,	A25/TP3-0.5,							
A28/TP1-0.2,	A28/TP5-0.3,							
A30/TP2-0.2,	A32/TP1-0.2,							
A32/DUP4-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2,							
A35/TP3-0.2,	A36/SP1-1,							
A36/SP1-2								

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
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) A7-8/SP1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A7-8/SP1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A9/TP1-0.1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A9/TP1-0.1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/DUP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/DUP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A11/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A11/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A11/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP080) A11/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A14/TP1-0.1, A14/TP3-0.2, A15/TP1-0.2, A15/TP2-0.2, A15/TP3-0.2, A15/TP4-0.2, A15/TP5-0.2, A15/TP6-0.2, A29/TP2-0.2, A29/TP2-0.6, A31/TP1-0.2, A34/TP1-0.1, A34/TP2-0.1, A34/TP3-0.2, A34/TP4-0.2	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	03-Dec-2021	✓
Soil Glass Jar - Unpreserved (EP080)							

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
EP080/071: Total Petroleum Hydrocarbons - Continued								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	03-Dec-2021	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2,							
A18/TP1-0.2,	A18/DUP2-0.2,							
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2							
Soil Glass Jar - Unpreserved (EP071)								
A29/TP2-0.2,	A29/TP2-0.6,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	06-Jan-2022	✓
A31/TP1-0.2,	A34/TP1-0.1,							
A34/TP2-0.1,	A34/TP3-0.2,							
A34/TP4-0.2								
Soil Glass Jar - Unpreserved (EP071)								
A18/TP1-0.2,	A18/DUP2-0.2,	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2							
Soil Glass Jar - Unpreserved (EP080)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	04-Dec-2021	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2,	A30/TP2-0.2,							
A32/TP1-0.2,	A32/DUP4-0.2,							
A32/TP2-0.2,	A32/TP3-0.2,							
A32/TP4-0.2,	A32/TP5-0.2,							
A32/TP6/0.2,	A32/TP7/0.2,							
A35/TP2-0.2								
Soil Glass Jar - Unpreserved (EP080)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2,	A17/TP1-0.2,							
A17/SP1-1,	A22/TP1-0.2,							
A23/TP1-0.3,	A23/DUP3-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3								
Soil Glass Jar - Unpreserved (EP071)								

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
EP080/071: Total Petroleum Hydrocarbons - Continued							
A30/TP2-0.2, A32/TP1-0.2, A32/DUP4-0.2, A32/TP2-0.2, A32/TP3-0.2, A32/TP4-0.2, A32/TP5-0.2, A32/TP6/0.2, A32/TP7/0.2, A35/TP2-0.2, A35/TP3-0.2, A36/SP1-1, A36/SP1-2	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP071)							
A17/TP1-0.2, A17/SP1-1, A22/TP1-0.2, A23/TP1-0.3, A23/DUP3-0.3, A24/TP1-0.2, A25/TP1-0.5, A25/TP3-0.5, A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
A35/TP3-0.2, A36/SP1-1, A36/SP1-2	**20-Nov-2021**	**29-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓

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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071) A7-8/SP1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A7-8/SP1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A9/TP1-0.1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A9/TP1-0.1	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/DUP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/DUP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A10/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A10/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A11/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A11/TP1-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A11/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	05-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP080) A11/TP2-0.2	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
Soil Glass Jar - Unpreserved (EP071) A32/TP8-0.2, A32/TP9-0.2, A32/DUP5-0.2	**10-Nov-2021**	**29-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	08-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080) A14/TP1-0.1, A14/TP3-0.2, A15/TP1-0.2, A15/TP2-0.2, A15/TP3-0.2, A15/TP4-0.2, A15/TP5-0.2, A15/TP6-0.2, A29/TP2-0.2, A29/TP2-0.6, A31/TP1-0.2, A34/TP1-0.1, A34/TP2-0.1, A34/TP3-0.2, A34/TP4-0.2	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	03-Dec-2021	✓
Soil Glass Jar - Unpreserved (EP080)							

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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued							
A14/TP1-0.1, A14/TP3-0.2, A15/TP1-0.2, A15/TP2-0.2, A15/TP3-0.2, A15/TP4-0.2, A15/TP5-0.2, A15/TP6-0.2, A18/TP1-0.2, A18/DUP2-0.2, A18/TP2-0.4, A18/TP4-0.6, A19/TP2-0.3, A19/TP4-0.2, A20/TP1-0.2, A20/TP2-0.2, A20/TP3-0.2, A29/TP1-0.2	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	03-Dec-2021	✓
Soil Glass Jar - Unpreserved (EP071)							
A29/TP2-0.2, A29/TP2-0.6, A31/TP1-0.2, A34/TP1-0.1, A34/TP2-0.1, A34/TP3-0.2, A34/TP4-0.2	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP071)							
A18/TP1-0.2, A18/DUP2-0.2, A18/TP2-0.4, A18/TP4-0.6, A19/TP2-0.3, A19/TP4-0.2, A20/TP1-0.2, A20/TP2-0.2, A20/TP3-0.2, A29/TP1-0.2	**19-Nov-2021**	**27-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
A1/TP1-0.3, A4/TP1-0.3, A6/TP1-0.1, A12/SP1-1, A16/TP1-0.2, A30/TP2-0.2, A32/TP1-0.2, A32/DUP4-0.2, A32/TP2-0.2, A32/TP3-0.2, A32/TP4-0.2, A32/TP5-0.2, A32/TP6/0.2, A32/TP7/0.2, A35/TP2-0.2	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	04-Dec-2021	✓
Soil Glass Jar - Unpreserved (EP080)							
A1/TP1-0.3, A4/TP1-0.3, A6/TP1-0.1, A12/SP1-1, A16/TP1-0.2, A17/TP1-0.2, A17/SP1-1, A22/TP1-0.2, A23/TP1-0.3, A23/DUP3-0.3, A24/TP1-0.2, A25/TP1-0.5, A25/TP3-0.5, A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓
Soil Glass Jar - Unpreserved (EP071)							

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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued							
A30/TP2-0.2, A32/TP1-0.2, A32/DUP4-0.2, A32/TP2-0.2, A32/TP3-0.2, A32/TP4-0.2, A32/TP5-0.2, A32/TP6/0.2, A32/TP7/0.2, A35/TP2-0.2, A35/TP3-0.2, A36/SP1-1, A36/SP1-2	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP071)							
A17/TP1-0.2, A17/SP1-1, A22/TP1-0.2, A23/TP1-0.3, A23/DUP3-0.3, A24/TP1-0.2, A25/TP1-0.5, A25/TP3-0.5, A28/TP1-0.2, A28/TP5-0.3	**20-Nov-2021**	**27-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	06-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
A35/TP3-0.2, A36/SP1-1, A36/SP1-2	**20-Nov-2021**	**29-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓

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
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
A32/TP8-0.2,	A32/TP9-0.2,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**29-Nov-2021**	24-Nov-2021	×
A32/DUP5-0.2								
Soil Glass Jar - Unpreserved (EP080)								
A7-8/SP1,	A9/TP1-0.1,	**10-Nov-2021**	**26-Nov-2021**	24-Nov-2021	×	**30-Nov-2021**	24-Nov-2021	×
A10/TP1-0.2,	A10/DUP1-0.2,							
A10/TP2-0.2,	A11/TP1-0.2,							
A11/TP2-0.2								
Soil Glass Jar - Unpreserved (EP080)								
A29/TP2-0.2,	A29/TP2-0.6,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**29-Nov-2021**	03-Dec-2021	✓
A31/TP1-0.2,	A34/TP1-0.1,							
A34/TP2-0.1,	A34/TP3-0.2,							
A34/TP4-0.2								
Soil Glass Jar - Unpreserved (EP080)								
A14/TP1-0.1,	A14/TP3-0.2,	**19-Nov-2021**	**26-Nov-2021**	03-Dec-2021	✓	**30-Nov-2021**	03-Dec-2021	✓
A15/TP1-0.2,	A15/TP2-0.2,							
A15/TP3-0.2,	A15/TP4-0.2,							
A15/TP5-0.2,	A15/TP6-0.2,							
A18/TP1-0.2,	A18/DUP2-0.2,							
A18/TP2-0.4,	A18/TP4-0.6,							
A19/TP2-0.3,	A19/TP4-0.2,							
A20/TP1-0.2,	A20/TP2-0.2,							
A20/TP3-0.2,	A29/TP1-0.2							
Soil Glass Jar - Unpreserved (EP080)								
A30/TP2-0.2,	A32/TP1-0.2,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**29-Nov-2021**	04-Dec-2021	✓
A32/DUP4-0.2,	A32/TP2-0.2,							
A32/TP3-0.2,	A32/TP4-0.2,							
A32/TP5-0.2,	A32/TP6/0.2,							
A32/TP7/0.2,	A35/TP2-0.2							
Soil Glass Jar - Unpreserved (EP080)								
A1/TP1-0.3,	A4/TP1-0.3,	**20-Nov-2021**	**26-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓
A6/TP1-0.1,	A12/SP1-1,							
A16/TP1-0.2,	A17/TP1-0.2,							
A17/SP1-1,	A22/TP1-0.2,							
A23/TP1-0.3,	A23/DUP3-0.3,							
A24/TP1-0.2,	A25/TP1-0.5,							
A25/TP3-0.5,	A28/TP1-0.2,							
A28/TP5-0.3								
Soil Glass Jar - Unpreserved (EP080)								
A35/TP3-0.2,	A36/SP1-1,	**20-Nov-2021**	**29-Nov-2021**	04-Dec-2021	✓	**30-Nov-2021**	04-Dec-2021	✓
A36/SP1-2								

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
MM823: Salmonella (absence / presence)								
Sterile Plastic Jar (MM823)								
A19/TP2-0.1,	A19/TP4-0.1,	**19-Nov-2021**	**----**	----	----	**26-Nov-2021**	23-Nov-2021	×
A29/TP1-0.1,	A29/TP2-0.1							
Sterile Plastic Jar (MM823)								
A25/TP1-0.5,	A25/TP3-0.5,	**20-Nov-2021**	**----**	----	----	**26-Nov-2021**	24-Nov-2021	×
A28/TP1-0.1,	A28/TP5-0.1							
MM869: E.coli and Thermotolerant Coliforms by MPN								
Sterile Plastic Jar (MM869)								
A19/TP2-0.1,	A19/TP4-0.1,	**19-Nov-2021**	**----**	----	----	**26-Nov-2021**	23-Nov-2021	×
A29/TP1-0.1,	A29/TP2-0.1							
Sterile Plastic Jar (MM869)								
A25/TP1-0.5,	A25/TP3-0.5,	**20-Nov-2021**	**----**	----	----	**26-Nov-2021**	24-Nov-2021	×
A28/TP1-0.1,	A28/TP5-0.1							

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)							
Buchi Ammonia	EK055	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	7	63	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	8	76	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	7	65	**10.77**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	7	65	**10.77**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	2	10	**20.00**	**9.52**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	7	63	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	7	63	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	8	77	**10.39**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	8	77	**10.39**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Buchi Ammonia	EK055	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	2	6	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	76	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	3	10	**30.00**	**14.29**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	3	6	**50.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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 Control Samples (LCS) - Continued							
TRH Volatiles/BTEX	EP080	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Buchi Ammonia	EK055	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Electrical Conductivity (1:5)	EA010	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	76	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	10	**10.00**	**4.76**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Buchi Ammonia	EK055	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	76	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	4	65	**6.15**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	10	**10.00**	**4.76**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	63	**6.35**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	77	**5.19**	**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
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
Electrical Conductivity (1:5)	EA010	SOIL	In house: Referenced to Rayment and Lyons 3A1 and APHA 2510. Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
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).
Exchangeable Cations on Alkaline Soils	ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Major Anions - Soluble	ED040S	SOIL	In house: Soluble Anions are determined off a 1:5 soil / water extract by ICPAES.
Chloride Soluble By Discrete Analyser	ED045G	SOIL	In house: Referenced to APHA 4500-Cl- E. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm. Analysis is performed on a 1:5 soil / water leachate.
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 AS 3550, 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)
Buchi Ammonia	EK055	SOIL	In house: Referenced to APHA 4500-NH3 B&G, H Samples are steam distilled (Buchi) prior to analysis and quantified using titration, FIA or Discrete Analyser.
Nitrite as N - Soluble by Discrete Analyser	EK057G	SOIL	In house: Referenced to APHA 4500-NO3- B. Nitrite in a water extract is determined by direct colourimetry by Discrete Analyser.
Nitrate as N - Soluble by Discrete Analyser	EK058G	SOIL	In house: Referenced to APHA 4500-NO3- F. Nitrate in the 1:5 soil:water extract is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results.
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	SOIL	In house: Thermo Scientific Method D08727 and NEMI (National Environmental Method Index) Method ID: 9171. This method covers the determination of total oxidised nitrogen (NOx-N) and nitrate (NO3-N) by calculation, Combined oxidised Nitrogen (NO2+NO3) in a water extract is determined by direct colourimetry by Discrete Analyser.
TKN as N By Discrete Analyser	EK061G	SOIL	In house: Referenced to APHA 4500-Norg-D Soil samples are digested using Kjeldahl digestion followed by determination by Discrete Analyser.

Analytical Methods	Method	Matrix	Method Descriptions
Total Nitrogen as N (TKN + NOx) By Discrete Analyser	EK062G	SOIL	In house: Referenced to APHA 4500 Norg/NO3- Total Nitrogen is determined as the sum of TKN and Oxidised Nitrrogen, each determined seperately as N.
Total Phosporus By Discrete Analyser	EK067G	SOIL	In house: Referenced to APHA 4500 P-B&F This procedure involves sulfuric acid digestion and quantification using Discrete Analyser.
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.
Salmonella (absence / presence)	MM823	SOIL	Microbiological analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992).
Coliforms, Thermotolerant Coliforms and E.coli in Biosolids/Soils using AquaCHROM ECC by MPN	* MM869	SOIL	Microbiological analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992).

Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method (Alkaline Soils)	ED006PR	SOIL	In house: Referenced to Rayment and Lyons method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Lyons method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
TKN/TP Digestion	EK061/EK067	SOIL	In house: Referenced to APHA 4500 Norg- D; APHA 4500 P - H. Macro Kjeldahl digestion.
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
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.

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SAMPLE RECEIPT ADVICE

Client Details	
Client	ENRS
Attention	Chris Allen

Sample Login Details	
Your reference	ENRS2069, 48 Campbell St - DSI
Envirolab Reference	284012
Date Sample Received	29/11/2021
Date Instructions Received	29/11/2021
Date Results Expected to be Reported	06/12/2021

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	5 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	19
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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ABN 37 112 535 645
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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil
A10/TP1-0.2T	✓	✓	✓	✓
A18/TP1-0.2T	✓	✓	✓	✓
A23/TP1-0.3T	✓	✓	✓	✓
A32/TP1-0.2T	✓	✓	✓	✓
A32/TP9-0.2T	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EW2105036**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: Chris Allen	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
E-mail	: chris@enrs.com.au	E-mail	: Aneta.Prosaroski@ALSGlobal.com
Telephone	: ----	Telephone	: +61 2 4225 3125
Facsimile	: ----	Facsimile	: W 02 42253128 N 02 44232083
Project	: ENRS2069 - 48 Campbell St - DSI	Page	: 1 of 2
Order number	: ENRS2069	Quote number	: EB2017ENVNAT0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Client - CA		

Dates

Date Samples Received	: 25-Nov-2021 15:07	Issue Date	: 25-Nov-2021
Client Requested Due Date	: 29-Nov-2021	Scheduled Reporting Date	: **29-Nov-2021**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 11.2
Receipt Detail	:	No. of samples received / analysed	: 3 / 3

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
- **Analytical work for this work order will be conducted at ALS Sydney.**
- **Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.**
- **Please direct any queries you have regarding this work order to the above ALS laboratory contact.**
- 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.
- **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.**

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
Dissolved Mercury by FIMS : EG035F		
A27-SW01	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
Dissolved Metals by ICP-MS - Suite A : EG020A-F		
A27-SW01	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered

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: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - MM532 Salmonella (absence / presence)	WATER - MW006 (FC & Ec) Thermotolerant Coliforms & E.coli by Membrane	WATER - NT-13 Extended Water Suite A	WATER - W-04 TRH/BTEXN	WATER - W-12 OC/OP Pesticides	WATER - W-26 TRH/BTEXN/PAH/8 Metals
EW2105036-001	25-Nov-2021 00:00	A27-SW01	✓	✓	✓		✓	✓
EW2105036-002	25-Nov-2021 00:00	A27-DUP01				✓		
EW2105036-003	25-Nov-2021 00:00	A27-R01				✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au
- EDI Format - ESDAT (ESDAT)	Email	lab@enrs.com.au

QUALITY CONTROL REPORT

Work Order	: **EW2105036**	Page	: 1 of 9
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: Chris Allen	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: ----	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - 48 Campbell St - DSI	Date Samples Received	: 25-Nov-2021
Order number	: ENRS2069	Date Analysis Commenced	: 26-Nov-2021
C-O-C number	: ----	Issue Date	: 06-Dec-2021
Sampler	: Client - CA		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Sarah Griffiths	Microbiologist	Sydney Microbiology, Smithfield, NSW
Uma Nagendiram	Subcontracting Coordinator	WRG Subcontracting, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, 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

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005P: pH by PC Titrator (QC Lot: 4040432)									
ES2142887-003	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.47	7.53	0.8	0% - 20%
ES2142868-005	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.89	7.97	1.0	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 4040433)									
ES2142927-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	8140	8210	0.8	0% - 20%
EW2105024-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	200	201	0.0	0% - 20%
EW2105022-003	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	180	178	0.7	0% - 20%
EW2105023-006	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	189	179	5.8	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 4040436)									
EW2105024-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	17	21	18.8	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	17	21	18.8	0% - 20%
EW2105023-006	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	22	22	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	22	22	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 4041264)									
ES2143118-026	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	6	6	0.0	No Limit
EW2105030-003	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	24	24	0.0	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 4041263)									
ES2143118-026	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	87	87	0.0	0% - 20%
EW2105030-003	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	40	40	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 4040120)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
ED093F: Dissolved Major Cations (QC Lot: 4040120) - continued									
ES2142309-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Potassium	7440-09-7	1	mg/L	<1	<1	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4040121)									
ES2143032-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.013	0.012	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4040122)									
EW2105036-001	A27-SW01	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK040P: Fluoride by PC Titrator (QC Lot: 4040437)									
EW2105023-006	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.2	<0.1	66.7	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 4039882)									
ES2143011-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.15	0.14	0.0	0% - 50%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 4041262)									
ES2143115-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EW2105030-003	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 4039883)									
EW2105036-001	A27-SW01	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.01	<0.01	0.0	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 4041257)									
ES2142860-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.03	0.03	0.0	No Limit
ES2143115-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4039489)									
ES2142551-008	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2142551-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4039489)									
ES2142551-008	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2142551-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4039489)									
ES2142551-008	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4039489) - continued									
ES2142551-008	Anonymous	EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2142551-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	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: **WATER**

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
EA005P: pH by PC Titrator (QCLot: 4040432)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 4040433)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	99.7	91.1	107
				<1	2100 µS/cm	104	93.2	108
ED037P: Alkalinity by PC Titrator (QCLot: 4040436)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	107	81.0	111
				----	50 mg/L	114	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 4041264)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	97.7	82.0	122
				<1	500 mg/L	96.9	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 4041263)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	94.8	80.9	127
				<1	1000 mg/L	90.4	80.9	127
ED093F: Dissolved Major Cations (QCLot: 4040120)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	93.6	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	96.1	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	94.9	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	92.7	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 4040121)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	85.0	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	88.9	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	88.2	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	85.5	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	85.4	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	85.2	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	87.7	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4040122)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	93.2	83.0	105
EK040P: Fluoride by PC Titrator (QCLot: 4040437)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	5 mg/L	102	82.0	116
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4039882)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	101	90.0	114

Sub-Matrix: **WATER**

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
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4041262)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	102	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4039883)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	99.9	91.0	113
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 4041257)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	96.5	85.0	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 4039229)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	87.8	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	77.6	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	95.8	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	91.8	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	99.2	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	77.2	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	83.0	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	80.2	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	81.4	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	94.0	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	77.9	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	93.8	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	98.6	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	82.4	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	99.5	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	91.2	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	103	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	83.4	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	97.5	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	105	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	97.0	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039229)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	82.9	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	95.8	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	25.0	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	85.8	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	105	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	92.7	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	90.9	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	98.1	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	91.4	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	96.9	75.0	119

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4039229) - continued								
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	91.1	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	88.7	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	96.6	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	77.8	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	82.8	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	79.3	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	87.7	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	104	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	104	51.6	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4039228)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	77.1	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	73.5	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	86.2	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	74.0	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	67.8	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	72.0	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	79.2	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	78.8	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	75.8	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	74.6	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	67.8	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	81.0	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	70.8	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	69.0	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	67.0	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	65.9	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039227)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	79.4	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	91.0	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	94.3	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039489)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	99.5	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039227)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	77.0	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	72.6	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	73.2	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039489)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039489) - continued								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	100	75.0	127
EP080: BTEXN (QCLot: 4039489)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	92.7	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	95.2	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	88.0	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	85.8	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	92.4	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	107	70.0	120

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: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 4041264)							
ES2143118-026	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	113	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 4041263)							
ES2143118-026	Anonymous	ED045G: Chloride	16887-00-6	50 mg/L	111	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 4040121)							
ES2143032-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	87.5	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	87.9	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	89.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	88.7	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	86.0	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	87.3	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	87.4	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4040122)							
EW2105036-001	A27-SW01	EG035F: Mercury	7439-97-6	0.01 mg/L	90.3	70.0	130
EK040P: Fluoride by PC Titrator (QCLot: 4040437)							
EW2105023-006	Anonymous	EK040P: Fluoride	16984-48-8	5 mg/L	95.6	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 4039882)							
ES2143011-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	95.8	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4041262)							
ES2143115-001	Anonymous						

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EK057G: Nitrite as N by Discrete Analyser (QCLot: 4041262) - continued							
ES2143115-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	114	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 4039883)							
EW2105036-001	A27-SW01	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	86.5	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 4041257)							
ES2142860-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	95.4	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4039489)							
ES2142551-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	87.1	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4039489)							
ES2142551-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	86.6	70.0	130
EP080: BTEXN (QCLot: 4039489)							
ES2142551-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	78.4	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	81.6	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	82.2	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	81.1	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	85.7	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	77.7	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EW2105036**	Page	: 1 of 8
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: Chris Allen	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - 48 Campbell St - DSI	Date Samples Received	: 25-Nov-2021
Site	: ----	Issue Date	: 06-Dec-2021
Sampler	: Client - CA	No. of samples received	: 3
Order number	: ENRS2069	No. of samples analysed	: 3

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP068T: Organophosphorus Pesticide Surrogate	EW2105036-001	A27-SW01	**DEF**	78-48-8	63.3 %	66.5-111 %	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural						
A27-SW01	----	----	----	27-Nov-2021	25-Nov-2021	**2**
MM625: Salmonella - VIDAS (absence / presence)						
Sterile Plastic Bottle - Sodium Thiosulfate						
A27-SW01	----	----	----	01-Dec-2021	26-Nov-2021	**5**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

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: **WATER**

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

Matrix: **WATER**

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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	25-Nov-2021	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	23-Dec-2021	✓
EA065: Total Hardness as CaCO3							
Clear Plastic Bottle - Natural (ED093F)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	02-Dec-2021	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	09-Dec-2021	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	23-Dec-2021	✓
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	23-Dec-2021	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural (ED093F)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	02-Dec-2021	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Natural (EG020A-F)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	24-May-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Natural (EG035F)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**29-Nov-2021**	23-Dec-2021	✓
EK040P: Fluoride by PC Titrator							
Clear Plastic Bottle - Natural (EK040P)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	23-Dec-2021	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	23-Dec-2021	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	27-Nov-2021	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
A27-SW01	**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	23-Dec-2021	✓

Matrix: **WATER**

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
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
A27-SW01		**25-Nov-2021**	**----**	----	----	**27-Nov-2021**	27-Nov-2021	✓
EP068A: Organochlorine Pesticides (OC)								
Amber Glass Bottle - Unpreserved (EP068)								
A27-SW01		**25-Nov-2021**	**26-Nov-2021**	02-Dec-2021	✓	**28-Nov-2021**	05-Jan-2022	✓
EP068B: Organophosphorus Pesticides (OP)								
Amber Glass Bottle - Unpreserved (EP068)								
A27-SW01		**25-Nov-2021**	**26-Nov-2021**	02-Dec-2021	✓	**28-Nov-2021**	05-Jan-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP075(SIM))								
A27-SW01		**25-Nov-2021**	**26-Nov-2021**	02-Dec-2021	✓	**27-Nov-2021**	05-Jan-2022	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071)								
A27-SW01, A27-R01	A27-DUP01,	**25-Nov-2021**	**26-Nov-2021**	02-Dec-2021	✓	**27-Nov-2021**	05-Jan-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
A27-SW01, A27-R01	A27-DUP01,	**25-Nov-2021**	**26-Nov-2021**	09-Dec-2021	✓	**26-Nov-2021**	09-Dec-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber Glass Bottle - Unpreserved (EP071)								
A27-SW01, A27-R01	A27-DUP01,	**25-Nov-2021**	**26-Nov-2021**	02-Dec-2021	✓	**27-Nov-2021**	05-Jan-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
A27-SW01, A27-R01	A27-DUP01,	**25-Nov-2021**	**26-Nov-2021**	09-Dec-2021	✓	**26-Nov-2021**	09-Dec-2021	✓
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)								
A27-SW01, A27-R01	A27-DUP01,	**25-Nov-2021**	**26-Nov-2021**	09-Dec-2021	✓	**26-Nov-2021**	09-Dec-2021	✓
MM625: Salmonella - VIDAS (absence / presence)								
Sterile Plastic Bottle - Sodium Thiosulfate (MM625)								
A27-SW01		**25-Nov-2021**	**----**	----	----	**01-Dec-2021**	26-Nov-2021	×
MW006: Faecal Coliforms & E.coli by MF								
Sterile Plastic Bottle - Sodium Thiosulfate (MW006)								
A27-SW01		**25-Nov-2021**	**----**	----	----	**26-Nov-2021**	26-Nov-2021	✓

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: **WATER**

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)							
Alkalinity by PC Titrator	ED037-P	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	10	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	4	33	**12.12**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by PC Titrator	ED037-P	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	10	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	3	33	**9.09**	**8.33**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							

Matrix: **WATER**

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*	
Method Blanks (MB) - Continued							
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by PC Titrator	EA010-P	1	33	**3.03**	**1.67**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Fluoride by PC Titrator	EK040P	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**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
pH by PC Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Calculated TDS (from Electrical Conductivity)	EA016	WATER	In house: Calculation from Electrical Conductivity (APHA 2510 B) using a conversion factor specified in the analytical report. This method is compliant with NEPM Schedule B(3)
Alkalinity by PC Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA seal method 2 017-1-L
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The 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).
Fluoride by PC Titrator	EK040P	WATER	In house: Referenced to APHA 4500-F C: CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM Schedule B(3)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample 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)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode 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	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Salmonella - VIDAS (absence / presence)	MM625	WATER	Microbiological analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992).
Thermotolerant Coliforms & E.coli by Membrane Filtration	MW006	WATER	AS 4276.7

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2145700**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lab@enrs.com.au	E-mail	: Aneta.Prosaroski@ALSGlobal.com
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Facsimile	: 02 9037 4708	Facsimile	: +61-2-8784 8500
Project	: ENRS2069	Page	: 1 of 2
Order number	: ----	Quote number	: EB2017ENVNAT0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 48 Campbell st - DSI		
Sampler	: CA		

Dates

Date Samples Received	: 14-Dec-2021 19:00	Issue Date	: 14-Dec-2021
Client Requested Due Date	: 17-Dec-2021	Scheduled Reporting Date	: **17-Dec-2021**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: ----
Receipt Detail	:	No. of samples received / analysed	: 5 / 5

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.**
- Please note that the scheduled reporting date has not been confirmed with laboratory management due to the late arrival of the samples. If the scheduled reporting date is not achievable ALS will be in contact with you.
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- 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.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

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 - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2145700-001	14-Dec-2021 00:00	A13/TP2-0.2	✓	✓	
ES2145700-002	14-Dec-2021 00:00	A17/TP3-0.3	✓	✓	
ES2145700-003	14-Dec-2021 00:00	A17/TP3-0.7	✓	✓	
ES2145700-004	14-Dec-2021 00:00	A35/TP5-0.2	✓	✓	
ES2145700-005	14-Dec-2021 00:00	A35/Dup6-0.2	✓		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au
- EDI Format - ESDAT (ESDAT)	Email	lab@enrs.com.au

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2145700**	Page	: 1 of 10
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Project	: ENRS2069	Date Samples Received	: 14-Dec-2021
Order number	: ----	Date Analysis Commenced	: 15-Dec-2021
C-O-C number	: ----	Issue Date	: 17-Dec-2021
Sampler	: CA		
Site	: 48 Campbell st - DSI		
Quote number	: EN/222		
No. of samples received	: 5		
No. of samples analysed	: 5		

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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*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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

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: 4077693)									
ES2145196-027	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	54	53	0.0	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	26	26	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	33	32	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	29	28	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	88	90	2.3	0% - 50%
ES2145196-014	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	27	32	19.6	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	17	19	10.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	24.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	29	29	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	247	222	10.8	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	167	163	2.2	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4077695)									
ES2145700-003	A17/TP3-0.7	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	34	40	15.6	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	15	14	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	65	63	3.1	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	22	21	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	50	42	18.2	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4077696)									
ES2145196-006	Anonymous	EA055: Moisture Content	----	0.1	%	7.8	7.6	3.0	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 (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4077696) - continued									
ES2145196-031	Anonymous	EA055: Moisture Content	----	0.1	%	9.7	10.4	6.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4077697)									
ES2145700-005	A35/Dup6-0.2	EA055: Moisture Content	----	0.1	%	40.0	40.0	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4077694)									
ES2145196-014	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.3	0.3	0.0	No Limit
ES2145700-003	A17/TP3-0.7	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4077788)									
ES2145700-001	A13/TP2-0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4077787)									
ES2145700-001	A13/TP2-0.2	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	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4077787)									
ES2145700-001	A13/TP2-0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	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 (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4077787) - continued									
ES2145700-001	A13/TP2-0.2	EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4077786)									
ES2145700-001	A13/TP2-0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4077786)									
ES2145700-001	A13/TP2-0.2	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	205-99-2 205-82-3	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
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	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: 4077786) - continued									
ES2145700-001	A13/TP2-0.2	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: 4077424)									
ES2145726-047	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2145700-005	A35/Dup6-0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4077785)									
ES2145700-001	A13/TP2-0.2	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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4077424)									
ES2145726-047	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2145700-005	A35/Dup6-0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4077785)									
ES2145700-001	A13/TP2-0.2	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: BTEXN (QC Lot: 4077424)									
ES2145726-047	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
ES2145700-005	A35/Dup6-0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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: 4077693)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	112	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	114	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	126	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	111	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	107	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	98.8	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4077695)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	95.6	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	84.5	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	109	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	95.2	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	97.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	95.6	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	88.6	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4077694)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	120	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4077788)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	105	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4077787)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	67.0	123

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: 4077787) - continued								
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.7	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	99.2	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	103	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.1	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	99.7	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4077787)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	77.4	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	105	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	100	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	98.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	97.4	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	105	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 4077786)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	98.2	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	97.2	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	101	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	85.7	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	92.3	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	98.8	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	99.9	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	97.1	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	94.5	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	91.4	60.0	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 4077786) - continued								
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	40.4	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4077786)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	105	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	99.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	111	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	104	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.7	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	113	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	107	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	106	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	110	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.8	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.4	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	95.1	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4077424)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	117	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4077785)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	92.1	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	92.6	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	92.0	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4077424)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	120	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4077785)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	95.8	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	90.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	89.9	63.0	131
EP080: BTEXN (QCLot: 4077424)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	114	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	108	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	108	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	109	68.0	120

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: 4077424) - continued								
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	99.4	63.0	119

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: 4077693)							
ES2145196-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	92.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	100	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.1	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4077695)							
ES2145700-003	A17/TP3-0.7	EG005T: Arsenic	7440-38-2	50 mg/kg	74.1	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.3	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	93.1	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	99.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	96.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.6	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4077694)							
ES2145196-014	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	106	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4077788)							
ES2145700-001	A13/TP2-0.2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	93.6	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4077787)							
ES2145700-001	A13/TP2-0.2	EP068: gamma-BHC	58-89-9	0.5 mg/kg	82.6	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	77.1	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	82.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	78.2	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	88.9	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	89.3	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4077787)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4077787) - continued							
ES2145700-001	A13/TP2-0.2	EP068: Diazinon	333-41-5	0.5 mg/kg	93.9	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	90.2	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	98.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	90.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	85.2	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4077786)							
ES2145700-001	A13/TP2-0.2	EP075(SIM): Phenol	108-95-2	10 mg/kg	99.1	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	108	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	96.2	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	97.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	89.0	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4077786)							
ES2145700-001	A13/TP2-0.2	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	97.1	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4077424)							
ES2145726-047	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	115	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4077785)							
ES2145700-001	A13/TP2-0.2	EP071: C10 - C14 Fraction	----	480 mg/kg	95.3	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	108	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	114	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4077424)							
ES2145726-047	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	117	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4077785)							
ES2145700-001	A13/TP2-0.2	EP071: >C10 - C16 Fraction	----	860 mg/kg	101	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	112	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	103	52.0	132
EP080: BTEXN (QCLot: 4077424)							
ES2145726-047	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	98.6	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	94.3	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	95.5	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	94.6	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	95.6	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	90.1	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2145700**	Page	: 1 of 5
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Telephone	: +61 2 4225 3125
Project	: ENRS2069	Date Samples Received	: 14-Dec-2021
Site	: 48 Campbell st - DSI	Issue Date	: 17-Dec-2021
Sampler	: CA	No. of samples received	: 5
Order number	: ----	No. of samples analysed	: 5

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, 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)							
Soil Glass Jar - Unpreserved (EA055)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**----**	----	----	**15-Dec-2021**	28-Dec-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	12-Jun-2022	✓	**15-Dec-2021**	12-Jun-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	11-Jan-2022	✓	**15-Dec-2021**	11-Jan-2022	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**17-Dec-2021**	28-Dec-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**15-Dec-2021**	24-Jan-2022	✓
Soil Glass Jar - Unpreserved (EP080)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**17-Dec-2021**	28-Dec-2021	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
A13/TP2-0.2, A17/TP3-0.3, A17/TP3-0.7, A35/TP5-0.2, A35/Dup6-0.2	**14-Dec-2021**	**15-Dec-2021**	28-Dec-2021	✓	**17-Dec-2021**	28-Dec-2021	✓

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	3	23	**13.04**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**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	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	23	**13.04**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**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.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	ENRS
Attention	Lab Results

Sample Login Details	
Your reference	ENRS2088, 48 Campbell St DSI
Envirolab Reference	285485
Date Sample Received	15/12/2021
Date Instructions Received	15/12/2021
Date Results Expected to be Reported	17/12/2021

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	16
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil
A35/TP5-0.2T	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2145701**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Customer Services ES
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lab@enrs.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: 02 9037 4708	Telephone	: +61-2-8784 8555
Facsimile	: 02 9037 4708	Facsimile	: +61-2-8784 8500
Project	: ENSR82069	Page	: 1 of 2
Order number	: ENR82069	Quote number	: EW2021ENVNAT0001 (WO/001/21)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: CA		

Dates

Date Samples Received	: 14-Dec-2021 19:00	Issue Date	: 15-Dec-2021
Client Requested Due Date	: 17-Dec-2021	Scheduled Reporting Date	: **17-Dec-2021**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: ----
Receipt Detail	:	No. of samples received / analysed	: 3 / 3

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
- **Sample A35/DUP2 unpreserved bottle was not received, therefore PH, EC, TSS, Hardness analysis could not be conducted.**
- **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.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- 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.

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
Major Cations - Dissolved : ED093F		
A35/SW01	- Clear Plastic Bottle - Nitric Acid; Unfiltered	- Clear Plastic Bottle - Nitric Acid; Filtered

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: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA005P pH (PCT)	WATER - EA010P Electrical Conductivity (PCT)	WATER - EA025H Suspended Solids - Standard Level	WATER - ED093F + EA006 + EA065 Dissolved Major Cations + SAR + Hardness	WATER - W-04 SG TRH/BTEXN inc Silica Gel Clean Up	WATER - W-26T SG TRH/BTEXN/PAH/Total 8 Metals inc Silica Gel
ES2145701-001	14-Dec-2021 00:00	A35/SW01	✓	✓	✓	✓		✓
ES2145701-002	14-Dec-2021 00:00	A35 / DUP2					✓	
ES2145701-003	14-Dec-2021 00:00	A35 / R01					✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au

QUALITY CONTROL REPORT

Work Order	: **ES2145701**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Contact	: Customer Services ES
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 9037 4708	Telephone	: +61-2-8784 8555
Project	: ENSR82069	Date Samples Received	: 14-Dec-2021
Order number	: ENR82069	Date Analysis Commenced	: 15-Dec-2021
C-O-C number	: ----	Issue Date	: 17-Dec-2021
Sampler	: CA		
Site	: ----		
Quote number	: WO/001/21		
No. of samples received	: 3		
No. of samples analysed	: 3		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA005P: pH by PC Titrator (QC Lot: 4080525)									
ES2145701-001	A35/SW01	EA005-P: pH Value	----	0.01	pH Unit	6.53	6.40	2.0	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 4080524)									
ES2145701-001	A35/SW01	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	278	277	0.0	0% - 20%
EA025: Total Suspended Solids dried at 104 ± 2°C (QC Lot: 4079748)									
ES2145307-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	36	31	15.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 4079854)									
ES2145701-001	A35/SW01	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0067	0.0068	0.0	0% - 20%
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.030	0.028	6.5	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.018	0.017	0.0	0% - 50%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.007	0.008	14.1	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	1.94	1.94	0.3	0% - 20%
ES2145903-005	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4079864)									
ES2145653-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2145701-001	A35/SW01	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4079524)									
ES2145274-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2145701-003	A35 / R01	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4079524)									
ES2145274-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2145701-003	A35 / R01	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4079524)									
ES2145274-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2145701-003	A35 / R01	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	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: **WATER**

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
EA005P: pH by PC Titrator (QCLot: 4080525)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	99.8	98.8	101
				----	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 4080524)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	95.2	91.1	107
				<1	2100 µS/cm	103	93.2	108
EA025: Total Suspended Solids dried at 104 ± 2°C (QCLot: 4079748)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	93.0	83.0	129
				<5	1000 mg/L	101	82.0	110
				<5	463 mg/L	84.7	83.0	118
EG020T: Total Metals by ICP-MS (QCLot: 4079854)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	97.8	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.9	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	93.0	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	99.6	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	99.0	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	99.8	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4079864)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.4	77.0	111
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 4078466)								
EP071SG: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	82.3	55.8	112
EP071SG: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	79.3	71.6	113
EP071SG: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	80.7	56.0	121
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup (QCLot: 4078466)								
EP071SG: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	67.8	57.9	119
EP071SG: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	84.2	62.5	110
EP071SG: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	78.2	61.5	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4078467)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	73.5	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	82.7	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	78.5	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	70.6	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	66.1	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	69.2	64.3	116

Sub-Matrix: **WATER**

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4078467) - continued								
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	80.2	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	80.5	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	75.7	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	74.4	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	78.8	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	73.0	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	73.2	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	74.7	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	71.2	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	68.2	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4079524)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	103	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4079524)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	108	75.0	127
EP080: BTEXN (QCLot: 4079524)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	94.8	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	105	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	95.7	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	95.8	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	99.0	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	106	70.0	120

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: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 4079854)							
ES2145735-001	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	95.1	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	96.5	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	98.5	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	93.8	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	100	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	99.2	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 4079854) - continued							
ES2145735-001	Anonymous	EG020A-T: Zinc	7440-66-6	1 mg/L	97.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4079864)							
ES2145653-002	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	88.2	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4079524)							
ES2145274-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	102	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4079524)							
ES2145274-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	98.8	70.0	130
EP080: BTEXN (QCLot: 4079524)							
ES2145274-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	79.3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	92.8	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	105	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	101	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	106	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	125	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2145701**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division Sydney
Contact	: LAB ENRS	Telephone	: +61-2-8784 8555
Project	: ENSR82069	Date Samples Received	: 14-Dec-2021
Site	: ----	Issue Date	: 17-Dec-2021
Sampler	: CA	No. of samples received	: 3
Order number	: ENR82069	No. of samples analysed	: 3

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, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural						
A35/SW01	----	----	----	16-Dec-2021	14-Dec-2021	**2**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

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: **WATER**

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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
A35/SW01	**14-Dec-2021**	**----**	----	----	**16-Dec-2021**	14-Dec-2021	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P)							
A35/SW01	**14-Dec-2021**	**----**	----	----	**16-Dec-2021**	11-Jan-2022	✓
EA025: Total Suspended Solids dried at 104 ± 2°C							
Clear Plastic Bottle - Natural (EA025H)							
A35/SW01	**14-Dec-2021**	**----**	----	----	**16-Dec-2021**	21-Dec-2021	✓
ED093F: SAR and Hardness Calculations							
Clear Plastic Bottle - Nitric Acid; Unfiltered (ED093F)							
A35/SW01	**14-Dec-2021**	**----**	----	----	**16-Dec-2021**	21-Dec-2021	✓

Matrix: **WATER**

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
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
A35/SW01	**14-Dec-2021**	**16-Dec-2021**	12-Jun-2022	✓	**16-Dec-2021**	12-Jun-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
A35/SW01	**14-Dec-2021**	**----**	----	----	**16-Dec-2021**	11-Jan-2022	✓
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup							
Amber Glass Bottle - Unpreserved (EP071SG)							
A35/SW01, A35 / DUP2, A35 / R01	**14-Dec-2021**	**15-Dec-2021**	21-Dec-2021	✓	**16-Dec-2021**	24-Jan-2022	✓
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup							
Amber Glass Bottle - Unpreserved (EP071SG)							
A35/SW01, A35 / DUP2, A35 / R01	**14-Dec-2021**	**15-Dec-2021**	21-Dec-2021	✓	**16-Dec-2021**	24-Jan-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
A35/SW01	**14-Dec-2021**	**15-Dec-2021**	21-Dec-2021	✓	**16-Dec-2021**	24-Jan-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW01, A35 / DUP2, A35 / R01	**14-Dec-2021**	**16-Dec-2021**	28-Dec-2021	✓	**16-Dec-2021**	28-Dec-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW01, A35 / DUP2, A35 / R01	**14-Dec-2021**	**16-Dec-2021**	28-Dec-2021	✓	**16-Dec-2021**	28-Dec-2021	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW01, A35 / DUP2, A35 / R01	**14-Dec-2021**	**16-Dec-2021**	28-Dec-2021	✓	**16-Dec-2021**	28-Dec-2021	✓

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: **WATER**

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)							
Conductivity by PC Titrator	EA010-P	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	1	10	**10.00**	**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-MS - Suite A	EG020A-T	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Conductivity by PC Titrator	EA010-P	2	4	**50.00**	**8.33**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	3	10	**30.00**	**15.00**	✓	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-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Conductivity by PC Titrator	EA010-P	1	4	**25.00**	**1.67**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspended Solids (High Level)	EA025H	1	10	**10.00**	**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-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	**0.00**	**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-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**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
pH by PC Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Suspended Solids (High Level)	EA025H	WATER	In house: Referenced to APHA 2540D. A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM Schedule B(3)
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The 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).
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	WATER	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 - C36. This method is compliant with NEPM Schedule B(3).
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode 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	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EW2200245**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
E-mail	: lab@enrs.com.au	E-mail	: Aneta.Prosaroski@ALSGlobal.com
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Facsimile	: 02 9037 4708	Facsimile	: W 02 42253128 N 02 44232083
Project	: ENRS2069 - A33 Soils	Page	: 1 of 2
Order number	: ENRS2069	Quote number	: EW2021ENVNAT0001 (WO/001/21)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Client -CA		

Dates

Date Samples Received	: 19-Jan-2022 11:08	Issue Date	: 19-Jan-2022
Client Requested Due Date	: 21-Jan-2022	Scheduled Reporting Date	: **21-Jan-2022**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 20.1
Receipt Detail	:	No. of samples received / analysed	: 4 / 4

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
- **Analytical work for this work order will be conducted at ALS Sydney.**
- **Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.**
- **Please direct any queries you have regarding this work order to the above ALS laboratory contact.**
- 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.
- **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.**

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

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 - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EW2200245-001	18-Jan-2022 00:00	A33/TP1-0.2	✓	✓	
EW2200245-002	18-Jan-2022 00:00	A33/TP2-0.3	✓	✓	
EW2200245-003	18-Jan-2022 00:00	A33/TP3-0.3	✓	✓	
EW2200245-004	18-Jan-2022 00:00	A33/Dup	✓		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au

QUALITY CONTROL REPORT

Work Order	: **EW2200245**	Page	: 1 of 11
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: 02 42253125
Project	: ENRS2069 - A33 Soils	Date Samples Received	: 19-Jan-2022
Order number	: ENRS2069	Date Analysis Commenced	: 19-Jan-2022
C-O-C number	: ----	Issue Date	: 24-Jan-2022
Sampler	: Client -CA		
Site	: ----		
Quote number	: WO/001/21		
No. of samples received	: 4		
No. of samples analysed	: 4		

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*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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

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: 4128104)									
ES2201175-008	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	16	16	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	11	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	8	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	15	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	27	26	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	41	42	2.8	No Limit
ES2201317-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	12	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	16	16	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	25	12.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	59	76	25.2	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	106	98	8.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4128109)									
ES2201175-007	Anonymous	EA055: Moisture Content	----	0.1	%	19.9	19.8	0.8	0% - 50%
ES2201317-001	Anonymous	EA055: Moisture Content	----	0.1	%	11.8	12.8	8.7	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4128105)									
ES2201175-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2201317-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4127723)									
EW2200245-002	A33/TP2-0.3	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2201535-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	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 (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4127724)									
ES2201535-001	Anonymous	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	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4127724)									
ES2201535-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	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 (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4127724) - continued									
ES2201535-001	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4127722)									
EW2200245-002	A33/TP2-0.3	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2201535-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4127722)									
EW2200245-002	A33/TP2-0.3	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	205-99-2 205-82-3	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

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: 4127722) - continued									
EW2200245-002	A33/TP2-0.3	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
ES2201535-001	Anonymous	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	0.6	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.6	0.6	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	205-99-2 205-82-3	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
		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	1.1	1.2	8.7	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: 4127725)									
EW2200245-002	A33/TP2-0.3	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
ES2201535-001	Anonymous	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: 4127783)									
ES2201570-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EW2200246-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4127725)									
EW2200245-002	A33/TP2-0.3	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

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 (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4127725) - continued									
EW2200245-002	A33/TP2-0.3	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2201535-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	120	140	11.4	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: 4127783)									
ES2201570-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EW2200246-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4127783)									
ES2201570-001	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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
EW2200246-003	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	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: 4128104)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	110	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	121	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	104	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	108	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	107	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	98.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4128105)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	99.4	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4127723)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	85.8	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4127724)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	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	86.1	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.3	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.3	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	85.9	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	81.8	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	80.5	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4127724)								

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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4127724) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	84.5	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	83.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.9	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	79.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.3	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	76.9	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	78.4	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	56.2	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 4127722)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	102	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	95.1	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	100	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	72.8	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	95.3	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	103	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	101	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	96.1	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	98.7	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	97.6	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	53.2	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4127722)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	99.8	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	106	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	96.1	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	108	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	103	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.1	77.0	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4127722) - continued								
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	103	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	108	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	101	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	102	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	94.4	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	96.8	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	92.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	100	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4127725)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	108	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	108	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4127783)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	81.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127725)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	106	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	101	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	108	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127783)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	83.8	68.4	128
EP080: BTEXN (QCLot: 4127783)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	87.5	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	95.6	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.8	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	91.1	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	91.7	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	84.0	63.0	119

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**

Matrix Spike (MS) Report: Spike	SpikeRecovery(%)	Acceptable Limits (%)

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4128104)							
ES2201175-008	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	85.7	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	88.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	86.6	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	81.4	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	87.1	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	86.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	85.6	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4128105)							
ES2201175-008	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	99.4	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4127723)							
ES2201535-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	83.0	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4127724)							
ES2201535-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	84.2	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	73.3	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	83.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	81.5	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	82.6	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	100	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4127724)							
ES2201535-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	100	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	90.5	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	74.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	93.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	83.4	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4127722)							
ES2201535-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	101	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	107	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	91.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	101	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	65.8	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4127722)							
ES2201535-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	103	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4127725)							
ES2201535-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	109	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	119	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	122	52.0	132

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: 4127783)							
EW2200246-003	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	107	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127725)							
ES2201535-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	116	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	122	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	111	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127783)							
EW2200246-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70.0	130
EP080: BTEXN (QCLot: 4127783)							
EW2200246-003	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	98.1	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	98.4	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	101	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	97.7	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	99.6	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	96.6	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EW2200245**	Page	: 1 of 5
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Telephone	: 02 42253125
Project	: ENRS2069 - A33 Soils	Date Samples Received	: 19-Jan-2022
Site	: ----	Issue Date	: 24-Jan-2022
Sampler	: Client -CA	No. of samples received	: 4
Order number	: ENRS2069	No. of samples analysed	: 4

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, 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)							
Soil Glass Jar - Unpreserved (EA055)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**----**	----	----	**19-Jan-2022**	01-Feb-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	17-Jul-2022	✓	**20-Jan-2022**	17-Jul-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	15-Feb-2022	✓	**20-Jan-2022**	15-Feb-2022	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	28-Feb-2022	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	28-Feb-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	28-Feb-2022	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	28-Feb-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	28-Feb-2022	✓

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
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	01-Feb-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	01-Feb-2022	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
A33/TP1-0.2, A33/TP2-0.3, A33/TP3-0.3, A33/Dup	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**20-Jan-2022**	01-Feb-2022	✓

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	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**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.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	ENRS
Attention	Chris Allen

Sample Login Details	
Your reference	ENRS2069
Envirolab Reference	286983
Date Sample Received	20/01/2022
Date Instructions Received	20/01/2022
Date Results Expected to be Reported	21/01/2022

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	15
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Acid Extractable metalsin soil
A33/Trip	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EW2200244**		
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
E-mail	: lab@enrs.com.au	E-mail	: Aneta.Prosaroski@ALSGlobal.com
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Facsimile	: 02 9037 4708	Facsimile	: W 02 42253128 N 02 44232083
Project	: ENRS2069 - A35 Surface Waters	Page	: 1 of 2
Order number	: ENRS2069	Quote number	: EB2017ENVNAT0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Client -CA		

Dates

Date Samples Received	: 19-Jan-2022 10:42	Issue Date	: 19-Jan-2022
Client Requested Due Date	: 21-Jan-2022	Scheduled Reporting Date	: **21-Jan-2022**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 20.1
Receipt Detail	:	No. of samples received / analysed	: 4 / 4

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
- **Analytical work for this work order will be conducted at ALS Sydney.**
- **Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.**
- **Please direct any queries you have regarding this work order to the above ALS laboratory contact.**
- 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.
- **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.**

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

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: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA005P pH (PCT)	WATER - EA010P Electrical Conductivity (PCT)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EA065 (only) Total Hardness	WATER - W-04 SG TRH/BTEXN inc Silica Gel Clean Up	WATER - W-26T SG TRH/BTEXN/PAH/Total 8 Metals inc Silica Gel
EW2200244-001	18-Jan-2022 00:00	A35/SW NTH	✓	✓	✓	✓		✓
EW2200244-002	18-Jan-2022 00:00	A35/SW STH	✓	✓	✓	✓		✓
EW2200244-003	18-Jan-2022 00:00	A35/Dup3	✓	✓	✓	✓	✓	
EW2200244-004	18-Jan-2022 00:00	A35/R02					✓	

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received Date	Samples Received Evaluation	Instructions Received Date	Instructions Received Evaluation
EA005-P: pH by PC Titrator							
A35/Dup3	Clear Plastic Bottle - Natural	----	18-Jan-2022	19-Jan-2022	×	----	----
A35/SW NTH	Clear Plastic Bottle - Natural	----	18-Jan-2022	19-Jan-2022	×	----	----
A35/SW STH	Clear Plastic Bottle - Natural	----	18-Jan-2022	19-Jan-2022	×	----	----

Requested Deliverables

Accounts

- A4 - AU Tax Invoice (INV)	Email	accounts@enrs.com.au

LAB ENRS

- *AU Certificate of Analysis - NATA (COA)	Email	lab@enrs.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	lab@enrs.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	lab@enrs.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	lab@enrs.com.au
- Chain of Custody (CoC) (COC)	Email	lab@enrs.com.au
- EDI Format - ENMRG (ENMRG)	Email	lab@enrs.com.au
- EDI Format - ESDAT (ESDAT)	Email	lab@enrs.com.au

QUALITY CONTROL REPORT

Work Order	: **EW2200244**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Contact	: Aneta Prosaroski
Address	: 25 River Rd Shoalhaven Heads 2535	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 NSW Australia
Telephone	: 02 9037 4708	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - A35 Surface Waters	Date Samples Received	: 19-Jan-2022
Order number	: ENRS2069	Date Analysis Commenced	: 19-Jan-2022
C-O-C number	: ----	Issue Date	: 25-Jan-2022
Sampler	: Client -CA		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 4		
No. of samples analysed	: 4		

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, 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

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EA005P: pH by PC Titrator (QC Lot: 4127845)									
ES2201437-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.95	7.97	0.3	0% - 20%
ES2201437-010	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	8.54	8.51	0.4	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 4127843)									
ES2201428-003	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	173	173	0.0	0% - 20%
ES2201307-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	27	24	12.9	0% - 20%
ES2201437-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	10400	10400	0.6	0% - 20%
ES2201437-010	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1200	1200	0.2	0% - 20%
ES2201473-003	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	4480	4490	0.2	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 4128831)									
EW2200140-005	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	758	710	6.5	0% - 20%
EW2200140-023	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	708	670	5.4	0% - 20%
EG020T: Total Metals by ICP-MS (QC Lot: 4127729)									
ES2201557-002	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.007	0.007	0.0	No Limit
ES2201576-012	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020T: Total Metals by ICP-MS (QC Lot: 4127729) - continued									
ES2201576-012	Anonymous	EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4128872)									
ES2201300-010	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2201661-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4127840)									
EW2200244-001	A35/SW NTH	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4127840)									
EW2200244-001	A35/SW NTH	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4127840)									
EW2200244-001	A35/SW NTH	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	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: **WATER**

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
EA005P: pH by PC Titrator (QCLot: 4127845)								
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	100	98.8	101
				----	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 4127843)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	220 µS/cm	92.5	91.1	107
				<1	2100 µS/cm	100	93.2	108
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 4128831)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	102	87.0	109
				<10	293 mg/L	119	75.2	126
				<10	2835 mg/L	106	83.0	124
EG020T: Total Metals by ICP-MS (QCLot: 4127729)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	92.4	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	90.8	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	90.4	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	89.2	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	89.6	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	91.0	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	91.8	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4128872)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	101	77.0	111
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 4127526)								
EP071SG: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	72.3	55.8	112
EP071SG: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	97.4	71.6	113
EP071SG: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	99.7	56.0	121
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup (QCLot: 4127526)								
EP071SG: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	72.7	57.9	119
EP071SG: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	96.4	62.5	110
EP071SG: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	94.2	61.5	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4127525)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	54.7	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	76.9	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	90.5	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	72.6	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	78.0	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	83.0	64.3	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4127525) - continued								
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	84.2	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	84.6	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	85.5	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	76.4	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	76.0	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	92.6	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	75.9	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	78.3	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	84.3	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	85.2	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4127840)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	97.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127840)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	97.3	75.0	127
EP080: BTEXN (QCLot: 4127840)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	104	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	101	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	100	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	103	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	99.5	70.0	120

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: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 4127729)							
ES2201557-003	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	93.0	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	93.7	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	97.5	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	95.3	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	99.0	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	95.2	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 4127729) - continued							
ES2201557-003	Anonymous	EG020A-T: Zinc	7440-66-6	1 mg/L	93.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4128872)							
ES2201300-011	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	95.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4127840)							
EW2200244-001	A35/SW NTH	EP080: C6 - C9 Fraction	----	325 µg/L	117	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4127840)							
EW2200244-001	A35/SW NTH	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	114	70.0	130
EP080: BTEXN (QCLot: 4127840)							
EW2200244-001	A35/SW NTH	EP080: Benzene	71-43-2	25 µg/L	115	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	111	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	114	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	110	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	113	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	87.1	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EW2200244**	Page	: 1 of 6
Client	: **ENVIRONMENT & NATURAL RESOURCE SOLUTIONS**	Laboratory	: Environmental Division NSW South Coast
Contact	: LAB ENRS	Telephone	: +61 2 4225 3125
Project	: ENRS2069 - A35 Surface Waters	Date Samples Received	: 19-Jan-2022
Site	: ----	Issue Date	: 25-Jan-2022
Sampler	: Client -CA	No. of samples received	: 4
Order number	: ENRS2069	No. of samples analysed	: 4

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, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural							
A35/SW NTH,	A35/SW STH	----	----	----	19-Jan-2022	18-Jan-2022	1

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

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: **WATER**

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
EA005P: pH by PC Titrator								
Clear Plastic Bottle - Natural (EA005-P)								
A35/SW NTH,	A35/SW STH	**18-Jan-2022**	**----**	----	----	**19-Jan-2022**	18-Jan-2022	×
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P)								
A35/SW NTH,	A35/SW STH	**18-Jan-2022**	**----**	----	----	**19-Jan-2022**	15-Feb-2022	✓
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
A35/SW NTH,	A35/SW STH	**18-Jan-2022**	**----**	----	----	**20-Jan-2022**	25-Jan-2022	✓
ED093F: SAR and Hardness Calculations								
Clear Plastic Bottle - Natural (ED093F)								
A35/SW NTH,	A35/SW STH	**18-Jan-2022**	**----**	----	----	**19-Jan-2022**	25-Jan-2022	✓

Matrix: **WATER**

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
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
A35/SW NTH, A35/SW STH	**18-Jan-2022**	**19-Jan-2022**	17-Jul-2022	✓	**19-Jan-2022**	17-Jul-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
A35/SW NTH, A35/SW STH	**18-Jan-2022**	**----**	----	----	**20-Jan-2022**	15-Feb-2022	✓
EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup							
Amber Glass Bottle - Unpreserved (EP071SG)							
A35/SW NTH, A35/SW STH, A35/Dup3, A35/R02	**18-Jan-2022**	**20-Jan-2022**	25-Jan-2022	✓	**21-Jan-2022**	01-Mar-2022	✓
EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup							
Amber Glass Bottle - Unpreserved (EP071SG)							
A35/SW NTH, A35/SW STH, A35/Dup3, A35/R02	**18-Jan-2022**	**20-Jan-2022**	25-Jan-2022	✓	**21-Jan-2022**	01-Mar-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
A35/SW NTH, A35/SW STH	**18-Jan-2022**	**20-Jan-2022**	25-Jan-2022	✓	**20-Jan-2022**	01-Mar-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW NTH, A35/SW STH, A35/Dup3, A35/R02	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**19-Jan-2022**	01-Feb-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW NTH, A35/SW STH, A35/Dup3, A35/R02	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**19-Jan-2022**	01-Feb-2022	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
A35/SW NTH, A35/SW STH, A35/Dup3, A35/R02	**18-Jan-2022**	**19-Jan-2022**	01-Feb-2022	✓	**19-Jan-2022**	01-Feb-2022	✓

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: **WATER**

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)							
Conductivity by PC Titrator	EA010-P	5	45	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	7	**28.57**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Conductivity by PC Titrator	EA010-P	4	45	**8.89**	**8.33**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	17	**17.65**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Conductivity by PC Titrator	EA010-P	1	45	**2.22**	**1.67**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**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
pH by PC Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of `filterable` residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The 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).
TRH - Total Recoverable Hydrocarbons - Silica Gel Cleanup	EP071SG	WATER	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 - C36. This method is compliant with NEPM Schedule B(3).
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode 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	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

Appendix H

Make-Safe Methodology for AEC-R04 Friable Asbestos

SCOPE OF WORK FOR ASBESTOS MAKE-SAFE

Asbestos works should be carried out and validated in accordance with;

- A site-specific Asbestos Removal Control Plan (ARCP) (to be prepared by the removal contractor or an LAA);
- Code of Practice - Excavation Work (SafeWork NSW;2019);
- Code of Practice - How to Manage and Control Asbestos in the Workplace (SafeWork NSW;2019);
- Code of Practice - How to Safely Remove Asbestos (SafeWork NSW;2019);
- Guidance Material - Managing Asbestos in or on Soil (DECC;2014); and
- National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1), Volume 2 Schedule B1 Guideline on investigation levels for soil and groundwater.

The following recommendations are provided to support the development of a site specific plan for the in-situ make-safe of ***friable asbestos in soil (ASBINS)***:

Scope for Removal:	➢ Mobilise and establish site controls; ➢ Progressively spray remediation area with water and or PVA bonding solution. Avoid excess water which may accumulate or runoff; ➢ Cover AEC-R04 area with a layer of geotextile fabric; ➢ Conduct clearance inspection; ➢ Survey the surface and extent of the impacted area; ➢ Cover area with layer ENM/VENM or other certified material, to a thickness of minimum of 100-200mm, or to suitable thickness to ensure site stability. ➢ Conduct final clearance inspection; ➢ Survey final surface and extent. ➢ Submit survey and clearance certificates for appending to the property title and Asbestos Register; ➢ Prepare Environmental Management Plan (EMP) with protocols for annual inspections, maintenance and contractor inductions with no-dig policy.
Monitoring:	Control air monitoring is required daily during friable asbestos works in accordance with MFM (NOHSC;2005).
Summary of Removal Controls:	**Contractor –** Minimum 'Class A' licensed asbestos removalist; **PPE –** Disposable Type 5 coveralls, P2 respirator, disposable gloves, steel cap boots, safety glasses; **Supervision –** Accessible license holder on site at all times; **Site controls** - fencing, signage, plastic sheeting or similar material, and dust suppression during removal, and stop work wind monitoring to ensure no dust leaves the site boundary. **Tools –** No power tools, or abrasive methods to be used on asbestos materials. Breakage points to be made under suitable control methods using manual or mechanical methods only. **Decontamination –** All equipment to be disposed as waste or decontaminated using both wet and dry methods in accordance with the Code of Practice. **Waste –** Dispose of all asbestos contaminated waste to a licensed facility in accordance with section 29 of the POE (Waste) regulation 2005. Append disposal dockets to clearance certificate. Note asbestos waste

	disposal in the Shoalhaven is required to be contained in hazibags – refer to Council policy 'your waste' for specific requirements. Asbestos waste for disposal outside the Shoalhaven to be wrapped in two (2) layers of 200 micron (0.2 mm) plastic.
Decontamination:	• Decontaminate works area – Plastic ground sheets to be rolled up and disposed as waste taking care to contain all debris; • Personnel to remove PPE in decontamination area including wash/wipe boots and hand tools; • Equipment decontaminated using both wet and dry methods in accordance with the Code of Practice. Used wipes/rags to be disposed as asbestos waste; and • All used PPE to be disposed as asbestos waste.
Clearance:	Clearance inspection by an Asbestos Assessor at completion of works to determine if the area is safe following the removal of asbestos. Final clearance report to be supported by control air monitoring results. Further validation samples may be required where visual inspection is not conclusive.
Reporting:	Clearance Certificate (CC) required prior to the Site being accessed under non-asbestos controls.

Appendix I EPA Reporting Checklist

Reporting Stages Checklist: Table 2.1 – Detailed Site Investigation

NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Land

Detailed Site Investigation (DSI)			
Report section	**Required information**	**Included**	**Report Section**
Document control	Date, version number, author and reviewer (including certification details) and who commissioned the report	☒	**Page ii**
Executive summary	Background	☒	**Page iii**
	Objectives of the investigation	☒	**Page iii**
	Scope of work	☒	**Page iii**
	A summary of key findings, observations and sampling results (if available)	☒	**Page iii**
	Summary of conclusions and recommendations	☒	**Page iii**
Objectives	The objectives of the investigation/report and the broader objectives for the site/investigation	☒	**1.2**
Scope of work	Scope of work performed (and work not undertaken where relevant)	☒	**1.3**
Site identification	Site identification and detail items from ASC NEPM Field Checklist 'Site information' sheet	☒	**2.1**
Site history	Site history items from ASC NEPM Field Checklist 'Site information' sheet	☒	**3.0**
Site condition and surrounding environment	Site condition and surrounding environment items from ASC NEPM Field Checklist 'Site information' sheet	☒	**4.0**
CSM - Conceptual site model	See Table 2(a)	☒	**5.0**
DQO - Data quality objectives (if sampling is undertaken)	See Table 2(b)	☒	**7.0**
SAP - Sampling and analysis plan and sampling methodology (if sampling is undertaken)	See Table 2.2, and note and explain the rationale for any deviations from the plan	☒	**8.0**
QAQC - Quality assurance/quality control data evaluation	See Table 2(c)	☒	**9.0**

Detailed Site Investigation (DSI)			
Report section	**Required information**	**Included**	**Report Section**
(if sampling is undertaken)			
Field and analytical **Results** (if sampling is undertaken)	Summary of previous results, if applicable	☒	**3.1**
	A table(s) of analytical results that:		
	shows all essential details such as sample identification numbers and sampling depth	☒	**Table 19 to Table 21**
	shows assessment criteria	☒	**Table 10 to Table 13**
	highlights all results exceeding any assessment criteria	☒	**Table 19 to Table 21**
	Summary/discussion of the analytical results table	☒	**10.0**
	Sample descriptions for all media where applicable (e.g. soil, sediment, surface water, groundwater, soil vapour, ground gas, indoor air and biota)	☒	**Appendix D**
	Test pit or bore logs (well construction details where appropriate for example groundwater level expressed in Australian height datum)	☒	**Appendix D**
	Site plan showing all sample locations	☒	**Figure 7 to Figure 9**
	Site plan(s) showing the extent of soil and groundwater contamination (if known)	☒	**Figure 7 to Figure 11**
	Refer to ASC NEPM Schedule B2 sections 13 and 14 for information regarding the data presentation		
Conclusions and **Recommendations**	Summary of all findings and discussion of results	☒	**13.0**
	Conclusions addressing the stated objectives	☒	**13.1**
	Assumptions used in reaching the conclusions	☒	**13.1**
	Extent of uncertainties in the results (quantified where possible)	☒	**12.9**
	Recommendations for further work (if appropriate)	☒	**13.2**