



Design for a better *future /*

NSW DEPARTMENT OF
EDUCATION

**TARGETED DETAILED
SITE INVESTIGATION**

DALMENY PUBLIC
SCHOOL UPGRADE

wsp

MARCH 2025

Question today *Imagine tomorrow* Create for the future

Targeted Detailed Site Investigation Dalmeny Public School Upgrade

NSW Department of Education

WSP
Level 27, 680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

Tel: +61 2 9272 5100
Fax: +61 2 9272 5101
wsp.com

REV	DATE	DETAILS
A	20/20/2025	Draft
B	04/03/2025	Final

	NAME	DATE	SIGNATURE
Prepared by:	Melinda Collier	04/03/2025	
Reviewed by:	Julie Porter	04/03/2025	
Approved by:	Julie Porter	04/03/2025	

This document may contain confidential and legally privileged information, neither of which are intended to be waived, and must be used only for its intended purpose. Any unauthorised copying, dissemination or use in any form or by any means other than by the addressee, is strictly prohibited. If you have received this document in error or by any means other than as authorised addressee, please notify us immediately and we will arrange for its return to us.



TABLE OF CONTENTS

ABBREVIATIONS	IV
EXECUTIVE SUMMARY	V
1 INTRODUCTION	6
1.1 BACKGROUND.....	6
1.2 PROPOSED ACTIVITY DESCRIPTION.....	6
1.3 WORKS TO BE UNDERTAKEN UNDER SEPARATE PLANNING PATHWAY (NOT PART OF THIS REF).....	7
1.4 ACTIVITY SITE	7
2 SCOPE OF WORKS.....	8
2.1 PHASE 1 DESKTOP REVIEW OF EXISTING INFORMATION	8
2.2 SOIL CONTAMINATION ASSESSMENT.....	8
2.3 OBJECTIVES	9
3 SITE LOCATION AND SETTING.....	10
3.1 SITE LOCATION AND IDENTIFICATION	10
3.2 SITE INSPECTION	10
3.3 TOPOGRAPHY AND SURFACE WATER DRAINAGE	10
3.4 GEOLOGY	11
3.5 HYDROGEOLOGY	11
3.6 ACID SULFATE SOIL	11
4 SITE HISTORY REVIEW.....	12
4.1 HISTORICAL AERIAL PHOTOS	12
4.2 EPA ONLINE NOTICE RECORDS	13
4.3 PLANNING INFORMATION	14
4.4 REVIEW OF AVAILABLE REPORTS.....	14
4.5 SUMMARY OF SITE HISTORY	15
4.6 PRELIMINARY CONCEPTUAL SITE MODEL.....	15



5	DATA QUALITY OBJECTIVES	18
6	SAMPLING AND ANALYSIS PROGRAM.....	22
6.1	SAMPLING RATIONALE	22
6.2	FIELDWORK.....	22
6.3	LABORATORY ANALYSIS	23
7	SOIL ASSESSMENT CRITERIA.....	24
7.1	HEALTH INVESTIGATION LEVELS AND HEALTH SCREENING LEVELS.....	24
7.2	ECOLOGICAL SCREENING LEVELS AND ECOLOGICAL INVESTIGATION LEVELS	25
8	RESULTS AND DISCUSSION.....	27
8.1	SUBSURFACE CONDITIONS	27
8.2	SOIL RESULTS SUMMARY.....	27
8.3	PRELIMINARY WASTE CLASSIFICATION	27
8.4	UPDATED CONCEPTUAL SITE MODEL	28
9	DATA VALIDATION	30
10	FIELD QA/QC.....	32
10.1	FIELD RESULTS.....	32
10.2	SUMMARY OF QA/QC RESULTS.....	33
11	CONCLUSIONS.....	34
12	RECOMMENDATIONS.....	35
12.1	MITIGATION MEASURES.....	35
12.2	EVALUATION OF ENVIRONMENTAL IMPACTS.....	35
13	LIMITATIONS	36
13.1	PERMITTED PURPOSE.....	36
13.2	QUALIFICATIONS AND ASSUMPTIONS.....	36
13.3	USE AND RELIANCE.....	36
13.4	DISCLAIMER	37



REFERENCES.....	38
------------------------	-----------

LIST OF TABLES

TABLE 1.1	ENVIRONMENTAL FACTORS.....	6
TABLE 3.1	SUMMARY OF GENERAL SITE INFORMATION.....	10
TABLE 4.1	HISTORICAL AERIAL PHOTOGRAPH REVIEW.....	12
TABLE 4.2	PRELIMINARY CSM.....	16
TABLE 5.1	DQO PROCESS.....	18
TABLE 5.2	DQIS FOR FIELD TECHNIQUES.....	20
TABLE 5.3	DQIS FOR LABORATORY.....	20
TABLE 7.1	SOIL ECOLOGICAL ASSESSMENT CRITERIA.....	25
TABLE 8.1	UPDATED CSM.....	28
TABLE 9.1	DATA QUALITY INDICATORS.....	30
TABLE 9.2	DATA QUALITY ASSURANCE.....	31
TABLE 12.1	MITIGATION MEASURES.....	35

LIST OF APPENDICES

APPENDIX A	FIGURES
APPENDIX B	ANALYSIS SUMMARY TABLES
APPENDIX C	LABORATORY REPORTS
APPENDIX D	HISTORICAL AERIAL PHOTOS
APPENDIX E	PHOTOGRAPHIC LOG
APPENDIX F	BORE LOGS

ABBREVIATIONS

ACM	Asbestos containing material
CSM	Conceptual site model
DP	Deposited Plan
DQI	Data quality indicator
DQO	Data quality objective
DSI	Detailed site investigation
HIL	Health investigation level
HSL	Health screening level
LEP	Local environmental plan
LGA	Local government area
mAHD	Metres Australian Height Datum
mBGL	Metres below ground level
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	<i>National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)</i>
NL	Non-limiting
NSW EPA	New South Wales Environment Protection Authority
LOR	Laboratory limit of reporting
PSI	Preliminary site investigation
QA/QC	Quality assurance/quality control
SAQP	Sampling, analysis and quality plan
SOP	Standard operating procedure
SWL	Standing water level

EXECUTIVE SUMMARY

WSP Australia Pty Ltd (WSP) was commissioned by NSW Department of Education (DoE) to undertake a targeted Detailed Site Investigation (DSI) at Dalmeny Public School located at 129 Dalmeny Road, Prestons, NSW (the 'site'). The DSI is required to assess soil conditions to inform the proposed upgrade of the site. It is understood that the upgrade of the site involves removal of demountable teaching spaces and construction of permanent teaching spaces. The site location is identified on Figure 1, Appendix A. The site layout is presented on Figures 2 and 3, Appendix A. The site comprises Lot 321 in Deposit Plan (DP) 882619. The intrusive investigation area comprises the proposed development area located in the south western portion of the site.

Based on a review of historical information, the site comprised agricultural land until circa 1998. By 2004, school buildings have been constructed in the northern portion of the site. Between 2004 and 2018 the remainder of the site structures, predominately demountables on the western boundary are apparent. No significant changes to the site have occurred since 2018. The areas surrounding the site have generally comprised agricultural properties residential properties since circa 1965, with residential properties constructed circa 1998 to 2002.

The site was inspected on 14 January 2025. The site was observed to consist of a Public School. Site buildings (approximately 25) are interconnected by covered walkways and are located in the northern, western and central portion of the site with grass, asphalt or concrete areas located between the buildings. The north eastern portion of the site is utilised as an asphalt carpark with access off Dalmeny Drive in the north eastern corner of the site. The remainder of the south eastern and central portion of the site is utilised as grassed and vegetated playing fields. Two asphalt basketball courts are located in the central portion of the site.

A targeted intrusive investigation including advancement of a total of nine bore holes was undertaken on 14 and 15 January 2025. Bore holes were advanced to a depth of between 1.5 and 6.0 metres below ground level (m bgl) (i.e. into the natural soil underlying the fill).

The subsurface conditions encountered beneath the site during the 2025 investigation mostly comprised of clayey sand topsoil underlain by silty clay or silty gravel fill to maximum depths of between 1.3 m bgl – 1.5 m bgl. No potential asbestos containing material was noted. Fill was underlain by natural silty clay to depths of between 3.0 – 3.8 m bgl and siltstone to the maximum depth of investigation, 6.0 m bgl.

Concentrations of total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, benzene, toluene, ethylbenzene, xylene and naphthalene, heavy metals, phenols, organochlorine pesticides or polychlorinated biphenyls were reported below the adopted assessment criteria for the protection of human health based on the proposed continued use of the site for a primary school. Asbestos was not reported in soil samples analysed and was not observed during the investigation.

Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces. No vegetation stress was observed on site.

Based on the results of this targeted DSI it is concluded that the contamination risk at the proposed development area is low, and the site is suitable for the planned development. It should be noted contamination might be present at other areas of the site. The potential for unexpected finds to be encountered during construction earthworks should be managed during the development works under an unexpected finds protocol (noting that inclusions of brick, plastic, wood and gravel were recorded within fill material during the 2023 DSI).

To manage the residual contamination risk on-site, WSP recommends the following:

- A Construction Environmental Management Plan including an unexpected finds protocol should be developed and followed during the proposed development works.
- The Department of Education Asbestos Management Plan for NSW Government Schools shall continue to be followed after the development works.

1 INTRODUCTION

1.1 BACKGROUND

This targeted Detailed Site Investigation report has been prepared to accompany a Review of Environmental Factors (REF) prepared for the Department of Education (DoE) relating to the Dalmeny Public School Upgrade (the activity) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI).

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments – Consideration of environmental health facilities and schools, Addendum October 2024 (the Guidelines) by the Department of Planning, Housing and Infrastructure.

This report examines and takes into account the relevant environmental factors in the Guidelines and Environmental Planning and Assessment Regulations 2021 under Section 170, Section 171 and Section 171A of the EP&A Regulation as outlined in Table 1.1.

Table 1.1 Environmental Factors

ENVIRONMENTAL FACTOR	POTENTIAL ENVIRONMENTAL IMPACT	MANAGEMENT
A) The environmental impact on the community	Contamination impact during or post construction.	Managed under the sites construction environmental management plan (CEMP)
J) Risk to the safety of the environment	Whether the development will have adverse environmental impacts (contamination leak)	Managed under the sites construction CEMP
L) Pollution of the environment	Soil contamination during or post construction, impact of contamination spill.	Managed under the sites construction CEMP
R) Other relevant environmental factors	Impacts of land contamination, any soil and groundwater contamination on the proposed development.	Managed under the Department of Education Asbestos Management Plan for NSW Government Schools

1.2 PROPOSED ACTIVITY DESCRIPTION

The proposed activity for the Dalmeny Public School Upgrade includes the construction and occupation of a two-storey classroom building and associated covered walkways and landscaping.

1.2.1 DEMOLITION

- Demolish part of existing fence on Dalmeny Drive;
- Remove two (2) trees; and
- Earthworks.

1.2.2 CONSTRUCTION AND OCCUPATION

- Two-storey classroom building (Block H);
- Covered walkways (excluding between Block G and H);
- Footpath between block G and block H;
- Landscaping (surrounding Block H);

- Fence and gate south of Block H;
- OSD tank;
- New Main Switch Board;
- Substation; and
- Fire Hydrant.

The classroom building will consist of the following floor layout:

- Ground Floor Level: Comprises eight (8) general learning spaces (GLS) and two (2) learning commons spaces (LCS). Also located on the ground floor level are amenities, services, storage spaces and a lift and two staircases to provide access to the first-floor level; and
- First Floor Level: The first-floor level will also comprise eight (8) GLS and two (2) LCS. Also located on the first-floor level are amenities, a mechanical plant room and other rooms for services.

1.3 WORKS TO BE UNDERTAKEN UNDER SEPARATE PLANNING PATHWAY (NOT PART OF THIS REF)

Works to be undertaken under a separate planning pathway cannot be undertaken until the Activity is completed and operational.

- Decommission and remove existing single storey portable classrooms;
- Decommission and remove existing portable amenities;
- Associated covered walkways to be demolished;
- Associated site infrastructure works;
- Shade structure over pathway between block G and H;
- Remainder of landscaping; and
- Fencing and gate north-west of Block H.

1.4 ACTIVITY SITE

The project site is located at 129 Dalmeny Drive, Prestons and is legally described as Lot 312 DP 882619. Dalmeny Public School is located on the southern side of Dalmeny Drive and on the northern side of Umbria Street. The surrounding context of the site is predominantly low density residential.

2 SCOPE OF WORKS

2.1 PHASE 1 DESKTOP REVIEW OF EXISTING INFORMATION

A Preliminary Site Investigation (PSI) was undertaken by WSP in 2023. The scope of works undertaken for the PSI comprised a review of background site and regional information from:

- NSW Environment Protection Authority (EPA) records
 - acid sulfate soil mapping for the area
 - historical aerial photographs of the site and surrounding area
 - utility plans ('Dial Before You Dig' plans and any provided by Council) to identify site features
 - physical site setting information including topography, geology, hydrology, hydrogeology and potential sensitive receptors on or in the vicinity of the site
 - site survey drawings
 - upgrade study report.
-

2.2 SOIL CONTAMINATION ASSESSMENT

The scope of works undertaken for the DSI comprised:

- preparation of safe work method statement and job safety analysis documents for the fieldwork
- clearance of underground services within the investigation area by an accredited underground service locator
- advancement of a total of nine bore holes to a depth of between 1.5 and 6.0 metres below ground level (m bgl) i.e. into the natural soil underlying the fill
- Inspection of site surface and the collection of any observed potential asbestos containing material (ACM) fragment samples
- visual inspection and logging of the soil profile
- collection of soil samples at 0.1 m bgl, 0.5 m bgl, and the base of the borehole, at a minimum, and at any evidence of contamination or change in soil type or quality
- field screening of each sample for the presence of volatile organic compounds (VOCs) using a photo-ionisation detector (PID)
- in-field assessment of ACM undertaken by passing a 10 L soil sample through a 7 mm sieve. This was undertaken on at least one depth profile for each location (targeting fill material)
- One 500ml soil sample per location was collected for asbestos (quantification/7mm sieving national Environmental Protection measure (NEPM) methodology) analysis
- analysis of selected samples (one sample per location) for primary contaminants of concern (COPCs):
 - total recoverable hydrocarbons (TRH)
 - benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN)
 - polycyclic aromatic hydrocarbons (PAHs)

- heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc)
 - Analysis of selected samples for the following additional COPCs:
 - organochlorine and organophosphorus pesticides (OCPs, OPPs)
 - phenols
 - polychlorinated biphenyls (PCBs).
 - preparation of this DSI report documenting the findings of the investigation.
-

2.3 OBJECTIVES

DoE require a DSI to identify contamination impacts and determine the suitability of the investigation area for continued primary school land use. The objectives of the DSI are to:

- determine if there are risks to site occupants, site workers, the public and environment from any potential contaminants of concern
- determine the suitability of the investigation area for the current use and planned upgrade
- vertical delineation of the potential contamination and/or uncontrolled fill
- provide recommendations for remediation, if required.

3 SITE LOCATION AND SETTING

3.1 SITE LOCATION AND IDENTIFICATION

The general site identification details are provided in Table 3.1.

Table 3.1 Summary of general site information

Site name	Dalmeny Public School
Site address	129 Dalmeny Road, Prestons, NSW
Site identification	Lot 312 in DP 882619
Site area	Approximately 3 hectares
Intrusive investigation area	Approximately 1,500 m ²
Current site use	Site is currently in use as a primary school (Dalmeny Public School)
Surrounding land uses	Surrounded to the north, south west and east by low density residential land use. The M7 motorway is located approximately 500m east of the site.
Local government area (LGA) and zoning	Liverpool Council Local Government Area, Low Density Residential (R2)
Proposed site use	Continued primary school use

3.2 SITE INSPECTION

The site was inspected on 14th January 2025 by a WSP environmental scientist. The site was observed to consist of a primary school.

Site buildings (approximately 25) are interconnected by covered walkways and are located in the northern, western and central portion of the site with grass, asphalt or concrete areas located between the buildings. The north eastern portion of the site is utilised as an asphalt carpark with access off Dalmeny Drive in the north eastern corner of the site. The remainder of the south eastern and central portion of the site is utilised as grassed and vegetated playing fields. Two asphalt basketball courts are located in the central portion of the site.

The intrusive investigation area comprises the proposed development area identified in the concept design plan, located in the south western portion of the site (illustrated in Appendix A, Figure 3).

3.3 TOPOGRAPHY AND SURFACE WATER DRAINAGE

The site slopes gently to the east from approximately 40m Australian Height Datum (AHD) in the west to approximately 30 m AHD in the east.

Site water is expected to follow topography and flow across to the eastern boundary of the site.

The closest water body is an unnamed drainage channel located approximately 450m east of the site. Georges River is located approximately 3.8 km east of the site.

3.4 GEOLOGY

A review of the *Penrith 1:100,000 Geological Map Series Sheet 9030* (Geological Survey of NSW, 1991) indicates that the eastern portion of the site is underlain by Quaternary alluvium derived from Wianamatta Group shales and Hawkesbury Sandstone consisting of medium grained sand clay and silt. The western portion of the site is underlain by Triassic Bringley Shale of the Wianamatta Group consisting of shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone, rare coal and tuff.

The NSW Soil and Land Information System Soil Essentials Report obtained through eSPADE 14 August 2023 indicated the eastern portion of the site is underlain by a brown sandy loam to sandy clay loam and dull brown clay loam to fine sandy clay loam. The western portion of the site is underlain by friable brownish black loam to clay loam and brown clay loam to silty clay loam.

The subsurface conditions encountered beneath the site during the 2023 investigation¹ mostly comprised of silty or gravelly sandy clay fill to maximum depths of between 1.75 m bgl – 2.1 m bgl. The fill material had inclusions of brick, plastic, wood and gravel. No potential asbestos containing material was noted. Fill was identified in all boreholes to an average depth of 2 m bgl and was deepest in BH01 (2.1 m bgl). Fill material was underlain by sandy clayey silt or silty clay to depths of between 1.75 - 3.0 m bgl and siltstone to depths of between 2.45 m bgl to maximum depth of investigation, 2.95 m bgl.

The subsurface conditions encountered beneath the site during the 2025 investigation mostly comprised of clayey sand topsoil underlain by silty clay or silty gravel fill to maximum depths of between 1.3 m bgl – 1.5 m bgl. No potential asbestos containing material was noted. Fill was underlain by natural silty clay to depths of between 3.0 – 3.8 m bgl and siltstone to the maximum depth of investigation, 6.0 m bgl.

3.5 HYDROGEOLOGY

Based on the geological profile of the region and the depths to groundwater recorded in regional monitoring wells, groundwater is present within bedrock beneath the site at depths of greater than 5 m bgl. Based on site topography, groundwater flow is inferred to be toward the east.

A search of the WaterNSW online database² for registered groundwater bores was conducted on 22 January 2025 and identified no registered bore within a 500 m radius of the site.

3.6 ACID SULFATE SOIL

The online Australian Government Geoscience Australia Portal (Geoscience Australia Portal³) was accessed on 22 January 2025 and indicated that the site is located in an area of “extremely low probability of occurrence” of acid sulfate soils. The site is not subject to Acid Sulfate Soil development controls under the Liverpool Local Environmental Plan 2008.

¹ WSP, 2023, Targeted Detailed Site Investigation, Dalmeny Public School Upgrade, 1 November 2023

² <https://realtimedata.watersnw.com.au>

³ <https://portal.ga.gov.au/>

4 SITE HISTORY REVIEW

4.1 HISTORICAL AERIAL PHOTOS

A review of historical aerial photography covering the site and surrounding area was undertaken by WSP. A summary of the features identified is presented in Table 4.1. Copies of the photographs reviewed are provided in Appendix D.

Table 4.1 Historical aerial photograph review

YEAR	SITE	SURROUNDING LAND
1947	The site has been cleared and comprises agricultural land. A residence is located off site to the north west and is assumed associated with the agricultural land.	The surrounding land is predominantly vacant, agricultural or bushland.
1965	No significant changes since previous photograph.	Development has occurred to the west (agricultural).
1978	No significant changes since previous photograph. A portion of a large agricultural shed is partially located within the sites north western boundary.	No significant changes since previous photograph.
1986	No significant changes since previous photograph. The shed is no longer visible.	No significant changes since previous photograph. Agricultural development has occurred to the north.
1991	No significant changes since previous photograph.	Further development or earth works is occurring to the south of the site.
1998	The site appears to be grassland. Earthworks associated with the residential development surrounding the site are occurring in the north eastern corner and on the southern boundary of the site.	The associated residence to the north west of the site is no longer visible. A road is under construction to the north of the site. The land beyond the roadway to the north is undergoing residential development. Earthworks are occurring to the east of the site.
2002	The site remains cleared grass land. Remnants of earthworks are noted on the western boundary.	Low density residential development has occurred to the north, east and south of the site. A roadway has been constructed to the west.
2004	The primary school has been constructed. Four buildings are located in the northern portion of the site and the southern portion remains grassland. An asphalt basketball court is noted in the central portion of the site.	Residential development has occurred immediately west of the site.
2005	Additional buildings have been constructed along the western boundary (demountables) and in the western portion of the site.	Additional residential development has occurred surrounding the site.

YEAR	SITE	SURROUNDING LAND
2009	Additional buildings have been constructed along the western boundary (demountables). Buildings appear to be under construction in the northern and central portion of the site. The southern and central portions of the site appear to be fenced off to allow for construction and movement of vehicles. An additional basketball court is noted in the central eastern portion of the site.	Additional residential development has occurred surrounding the site.
2010	No significant changes since previous photograph.	No significant changes since previous photograph.
2012	Construction of additional structures in the north, north west and central portions of the site has occurred. The central and southern portions of the site remain grassed.	No significant changes since previous photograph.
2013	An additional structure (demountable) is noted in the central portion of the site.	No significant changes since previous photograph.
2015	An additional two structures (demountables) are noted in the central portion of the site.	No significant changes since previous photograph.
2018	An additional structure (demountable) is noted in the central western portion of the site.	No significant changes since previous photograph.
2020	An extension has occurred to one of the original buildings located in the central / northern portion of the site.	No significant changes since previous photograph.
2023	Three of the demountable buildings in the south western portion of the site have been removed.	No significant changes since previous photograph.
2024	Concreting of the eastern carparking area has occurred. The sports courts have been resurfaced.	No significant changes since previous photograph.

4.2 EPA ONLINE NOTICE RECORDS

An online search of the NSW EPA *Protection of the Environment Operations Act 1997* public register found no notices or licenses, either current or former, for the site or properties within 500m of the site.

A search of the NSW EPA online contaminated sites database⁴ conducted on 22 January 2025 did not identify the site or adjacent properties as currently being regulated by the NSW EPA, or as having been notified to NSW EPA as potentially contaminated. No former gas works, waste management facilities, or other sites with contamination issues regulated by the EPA are located on or adjacent to the site.

No properties within a 500m radius of the site are listed under the NSW EPA PFAS investigation program.

⁴ www.epa.nsw.gov.au/prclmapp/searchregister

4.3 PLANNING INFORMATION

The Section 10.7 planning certificate, dated 20 September 2023, provided the following information.

- The site is zoned R2 low Density Residential under the Liverpool Local Environmental Plan 2008.
- The site is not located within a conservation area.
- The site is not subject to development controls relating to bushfire hazard. The site is not bushfire prone land as defined by the EP&A Act 1979.
- The site is subject to development controls under the Liverpool Development Control Plan (DCP) 2008 Potentially Contaminated Land Policy. This is likely due to the sites historical land use for agricultural and horticultural activities.
- The site is subject to development controls relating to potentially saline soils under the Liverpool DCP 2008.
- The site is outside of flood planning area and not subject to flood related development controls for industrial/commercial and residential premises. The site is outside the extent of the probable maximum flood and not subject to flood related development controls only if the land is also outside of flood planning area.
- The site is not significantly contaminated land within the meaning of the *Contaminated Land Management Act 1997* (the Act).
- The site is not subject to a management order within the meaning of the Act.
- The site is not the subject of an approved voluntary management proposal within the meaning of the Act.
- The site is not subject to an ongoing maintenance order within the meaning of the Act.
- The site is not the subject of a site audit statement within the meaning of the Act.

No Environmental Planning Instrument heritage items are located on site or immediately surrounding the site. The site and surrounding properties are not listed on the Commonwealth Heritage List, National Heritage List or State Heritage Register.

4.4 REVIEW OF AVAILABLE REPORTS

WSP was provided with the following documents relevant to the site:

- Greencap (2017), *Asbestos Register, Dalmeny Public School (4634)*, 13 December 2017
- WSP (2023), *Targeted Detailed Site Investigation*, 1 November 2023.

4.4.1 GREENCAP (2017), ASBESTOS REGISTER

The register is dated 13 December 2017. The asbestos register presents the results of the survey undertaken. The register notes no asbestos was identified within permanent structures at the site; however asbestos was assumed to be present within the site demountable structures.

4.4.2 WSP (2023), TARGETED DETAILED SITE INVESTIGATION

A Targeted Detailed Site Investigation (DSI) was undertaken by WSP in 2023. The DIS targeted the area of a proposed upgrade located in the central and south western portion of the site (to the north east of the current proposed upgrade works).

The scope comprised advancement of five combined contamination and geotechnical boreholes and three contamination boreholes.

The subsurface conditions encountered beneath the site mostly comprised of silty or gravelly sandy clay fill to maximum depths of between 1.75 m bgl – 2.1 m bgl. The fill material had inclusions of brick, plastic, wood and gravel. No potential asbestos containing material was noted. Fill was identified in all boreholes to an average depth of 2 m bgl and was deepest in BH01 (2.1 m bgl). Fill material was underlain by sandy clayey silt or silty clay to depths of between 1.75 - 3.0 m bgl and siltstone to depths of between 2.45 m bgl to maximum depth of investigation, 2.95 m bgl.

WSP submitted at least one soil sample from each borehole for laboratory analysis for a suite of contaminants often found in fill material including heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRHs, BTEXN, PAHs, OCPs, PCBs and asbestos.

The results of the investigation were as follows:

- No concentrations of TRH, PAH, BTEXN, OCPs, heavy metals, phenols or PCBs were reported above the adopted assessment criteria for the protection of human health based on the proposed continued use of the site for a primary school. Asbestos was not reported in soil samples analysed and was not observed during the investigation.
- Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces. No vegetation stress was observed on site.
- Asbestos was not reported in soil samples analysed and was not observed during the investigation. However, the fill material had inclusions of brick, plastic, wood and gravel.

WSP concluded, based on the findings of this DSI, WSP has not identified any soil conditions that would preclude the use of the site for continued use as a primary school and for the planned development. It should be noted contamination might be present at other areas of the site. The potential for unexpected finds to be encountered during construction earthworks should be managed during the development works under an unexpected finds protocol (noting that inclusions of brick, plastic, wood and gravel were recorded within fill material during the DSI).

4.5 SUMMARY OF SITE HISTORY

Based on a review of historical information, the site comprised agricultural land until circa 1998. Between 1998 and 2002 no evidence of agricultural use of the site is apparent and an assumed associated off site residential structure is no longer visible. The surrounding land is undergoing residential development. By 2004 the four larger school buildings have been constructed in the northern portion of the site. Between 2004 and 2018 the remainder of the site structures, predominately demountables on the western boundary are apparent. No significant changes to the site have occurred since 2018.

The areas surrounding the site have generally comprised agricultural properties residential properties since circa 1965, with residential properties constructed circa 1998 to 2002.

Information obtained from the NSW department of education website for Dalmeny Public School (<https://dalmeny-p.schools.nsw.gov.au/>) indicates Dalmeny Public School was established in 2003 on agricultural land.

4.6 PRELIMINARY CONCEPTUAL SITE MODEL

Based on the site inspection and the desktop review of site setting and historical land use information, a preliminary CSM has been prepared. This is summarised in Table 4.2.

Table 4.2 Preliminary CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials potentially used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials associated with imported materials or demolished structures — pesticides used historically and recently to maintain the site.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials — surface soil impacts from application of pesticides used on-site. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination is not expected based on the historical land use at the site.
Contaminants of concern	Contaminants of concern at the site comprise: — TRH and BTEXN — PAHs — heavy metals — OCPs and OPPs — PCBs — asbestos.
Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — vertical migration of contaminants in soil from infiltration of rain water — lateral migration of contaminants through underground service trenches and other preferential pathways — run-off via surface contaminants in rain water — volatilisation of hydrocarbons in soil and/or groundwater.
Exposure pathways	Potential exposure pathways include: — inhalation of dust or vapours by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers. Exposure from contaminated groundwater has been discounted as part of the preliminary CSM due to: — the expected absence of gross soil contamination leading to groundwater contamination — the absence of groundwater extraction bores in the vicinity of the site.

Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — underlying soil and groundwater ecosystems — adjacent residential land uses — current and future users of the site — on-site and off-site construction or utility workers (those working within service pit trenches).
---------------------	--

5 DATA QUALITY OBJECTIVES

Systematic planning is critical to successful implementation of an environmental assessment and is used to define the type, quantity and quality of data needed to inform decisions. The United States Environmental Protection Agency has defined a process for establishing data quality objectives (DQOs), which has been referenced in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013).

DQOs ensure that:

- the study objectives are set
- appropriate types of data are collected (based on contemporary land use and chemicals of concern)
- the tolerance levels are set for potential decision making errors.

The DQO process is a seven-step iterative planning approach. The outputs of the DQO process are qualitative and quantitative statements which are developed in the first six steps. They define the purpose of the data collection effort, clarify what the data should represent to satisfy this purpose and specify the performance requirements for the quality of information to be obtained from the data. The output from the first six steps is then used in the seventh step to develop the data collection design that meets all performance criteria and other design requirements and constraints. The DQO process adopted for the works is outlined in Table 5.1.

Table 5.1 DQO process

STEP	DESCRIPTION	OUTCOMES
1	State the problem	The purpose of this assessment was to determine whether contaminants of concern were present at the site and, if so, assess potential risk to the future site users.
2	Identify the decisions/goal of the investigation	The decisions to be made based on the results of the investigation are as follows: — Has the soil been adequately sampled? — Were all the contaminants of concern analysed? — Is there a risk to future users of the site?
3	Identify the inputs to the decision	The inputs required to make the above decisions are as follows: — geological data — concentrations of contaminants of concern in soil — vertical delineation of chemicals in soil to preclude/include groundwater investigations. — site assessment criteria (outlined in Section 7) — observation data including presence of odours or discoloration and presence of potential hazardous materials (including asbestos) — distribution of identified contamination.
4	Define the study boundaries/constraints on data	The boundaries of the investigation have been identified as follows: — Spatial boundaries: site investigation area and intrusive investigation area as identified in Appendix A. — Vertical boundaries: 0.5 m into the natural soil underlying the fill, maximum depth of 6.0 m bgl — Temporal boundaries: the date of the project inception to the completion of the fieldwork under the investigation (January 2025).

STEP	DESCRIPTION	OUTCOMES
5	Develop a decision rule	The purpose of this step is to define the parameters of interest, specify the action levels and combine the outputs of the previous DQO steps into an ‘if...then...’ decision rule that defines the conditions that would cause the decision maker to choose alternative actions. The parameters of interest are concentrations of contaminants of concern in soil and evidence of uncontrolled fill material. An assessment of the concentrations of the contaminants of concern is to be undertaken to assess the suitability for recreational/open space land use. Should chemical or asbestos concentrations exceed the adopted assessment criteria, remedial options will be considered. Should vertical delineation of chemical concentrations in soil exceeding the adopted assessment criteria not be achieved, groundwater investigations will be considered.
6	Specify limits on decision errors	The acceptable limits on decision errors to be applied in the investigation and the manner of addressing possible decision errors have been developed based on the data quality indicators (DQIs) of precision, accuracy, representativeness, comparability and completeness and are presented in Table 5.2 and 5.3.
7	Optimise the design for obtaining data	The purpose of this step is to identify a resource-effective data collection design for generating data that satisfies the DQOs. This assessment has been designed considering the available information regarding the site. The resource effective data collection design that is expected to satisfy the DQOs is described in detail in Section 6. To ensure the design satisfies the DQOs, DQIs have been established to set acceptance limits on field methodologies and laboratory data collected.

DQIs for sampling techniques and laboratory analyses of collected soil samples define the acceptable level of error required for this validation assessment. The adopted field methodologies and data obtained have been assessed by reference to DQIs as follows:

- Precision: a quantitative measure of the variability (or reproducibility) of data
- Accuracy: a quantitative measure of the closeness of reported data to the true value
- Representativeness: the confidence (expressed qualitatively) that data are representative of each media present on the site
- Comparability: a qualitative parameter expressing the confidence with which one data set can be compared with another
- Completeness: a measure of the amount of useable data (expressed as a percentage) from a data collection activity.

A summary of the field and laboratory DQIs for the validation assessment are provided in Tables 5.2 and 5.3.

Table 5.2 DQIs for field techniques

DQI
Precision
Standard operating procedures (SOPs) appropriate and complied with
Collection of inter-laboratory and intra-laboratory duplicates
Accuracy
WSP SOPs appropriate and complied with
Collection of field and trip blanks and trip spikes
Representativeness
Appropriate media sampled
Comparability
Same SOPs used on each occasion
Experienced sampler
Climatic conditions (temperature, rainfall, wind)
Same type of samples collected
Completeness
SOPs appropriate and complied with
All required samples collected

Table 5.3 DQIs for laboratory

DQI	ACCEPTABLE LIMITS
Precision	
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x laboratory limit of reporting (LOR) – no limit 10 to 20 x LOR – 50% relative percentage difference (RPD) >20 x LOR – 30% RPD
NATA certified laboratories	NATA accreditation for analyses performed
Accuracy	
Analysis of laboratory prepared trip blanks (one per batch)	Below LORs for contaminants analysed
Analysis of rinsate blanks (one per day)	Below LORs for contaminants analysed
Analysis of laboratory blanks	Below LORs for contaminants analysed
Analysis of laboratory matrix spikes, laboratory control samples and surrogate recoveries	70-130% inorganics/metals 60-140% organics 10-40% semi-volatile organic compounds
Analysis of laboratory duplicates for contaminants of concern in soil	<10 x LOR – no limit

	10 to 20 x LOR – 50% RPD >20 x LOR – 30% RPD
Representativeness	
All required samples analysed	As per Section 6
Comparability	
Sample analytical methods used (including clean-up)	As per NEPM (2013)
Same units	Justify/quantify if different
Same laboratories	Justify/quantify if different
Sample LORs	Less than nominated criteria
Completeness	
All critical samples analysed	As per Section 6
All required analytes analysed	As per Section 6
Appropriate methods and LORs	As per NEPM (2013)
Sample documentation complete	
Sample holding times complied with	

6 SAMPLING AND ANALYSIS PROGRAM

6.1 SAMPLING RATIONALE

The sampling plan for the DSI comprised soil sampling of boreholes advanced by hand augur and drill rig across the site. Boreholes were advanced using a combination of hand augur, shovel and drill rig. Sample locations comprised the excavation of a 40cm square area to allow visual observation of the subsurface profile as well as sieving and inspection of the soil via NEPM methodology. The sampling frequency was compliant with the NSW EPA 2022, Sampling Design Guidelines.

Sample locations were chosen to provide coverage of the proposed development area.

6.2 FIELDWORK

6.2.1 PRELIMINARIES – SERVICE LOCATION

A desktop search for underground services using the ‘Dial Before You Dig’ service was undertaken prior to intrusive investigations. Clearance of all underground services within the investigation area was undertaken by an accredited underground service locator and sampling locations were cleared prior to the commencement of intrusive works. The service locator was provided with information/plans from the relevant asset owners.

6.2.2 INTRUSIVE INVESTIGATION WORKS AND SOIL SAMPLING

Intrusive investigation works were conducted on 14 January 2025 after all sampling locations were cleared by the service locator. The nine investigation locations were progressed to a maximum depth of between 1.5 m bgl and 6.0 m bgl. The rationale for the nominated depth was to investigate into the natural soil underlying the fill material.

Soil samples were generally collected from the surface (0.0-0.1 m bgl), 0.5-0.6 m bgl, 0.9-1.0 m bgl and where changes in lithology or evidence of contamination were observed. Duplicate samples were collected and screened with a photo-ionisation detector (PID) to analyse for volatile organic compounds (VOCs). PID readings were used to aid in selection of soil samples for laboratory analysis.

Subsurface materials were logged by an experienced environmental scientist according to AS1725: 2017 *Geotechnical Site Investigations*. Soil samples were placed in 250 mL jars, leaving minimal headspace, and closed using Teflon-coated lids.

Soil samples collected for asbestos analysis followed the sampling methodology outlined in the WA DoH 2009, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western, as referenced by the NEPM (2013). For ACM and friable asbestos (FA), a 10 L sample was collected and screened on-site through a ≤7 mm sieve. Any ACM/FA retained on the sieve (i.e. >7 mm in size) was bagged and sent to the primary laboratory for analysis. For analysis of asbestos fines (AF) a separate sample of approximately 500 mL was collected in a bag. This entire sample was sent to the laboratory for sieving and gravimetric determination of asbestos (<7 mm).

Dedicated disposable nitrile gloves were worn for each sample collected to minimise the potential for cross contamination. All soil samples were stored on ice in a cooler and transported to the laboratory under chain of custody documentation.

6.3 LABORATORY ANALYSIS

WSP submitted at least one soil sample from each borehole for laboratory analysis to a NATA accredited laboratory. Samples were selected based on field screening, including PID readings (volatiles) and sample appearance (visual and olfactory). Other samples obtained were retained for further analysis if required.

A suite of contaminants often found in fill material were analysed and included heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRHs, BTEXN, PAHs, OCPs, PCBs and asbestos.

7 SOIL ASSESSMENT CRITERIA

The purpose of this assessment is to determine the soil conditions, with respect to current potential soil contamination at the site. It is considered appropriate to assess the site based on the current and future use as an open space. Assessment criteria applicable for assessing laboratory analytical data is provided by the following:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013), specifically Schedule B1, Investigation Levels for Soil and Groundwater.
- Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) *Technical Report No. 10 Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater, Part 2: Application Document* (Friebel and Nadebaum, 2011).

Schedule B1 provides a framework for the use of investigation and screening levels based on a matrix of human health and ecological risks.

7.1 HEALTH INVESTIGATION LEVELS AND HEALTH SCREENING LEVELS

To assess the presence and extent of soil contamination at a site, the NSW EPA refers to the NEPM (2013) which provides health investigation levels (HILs) and health screening levels (HSLs) for the assessment of impacted soil.

HILs provide an assessment of potential risk to human health from chronic exposure to contaminants and have been developed based on land use setting. As the purpose of this investigation is to assess the site against risk to current site users, the 'HIL A' criteria for residential with garden/accessible soil including primary schools have been adopted; these criteria are considered applicable to primary school land use.

HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the vapour intrusion and inhalation pathway. The HSLs depend on specific soil physicochemical properties and land use scenarios. They apply to different soil types and depths. The 'HSL A' criteria have been adopted, in a subsurface comprising of clay.

HSLs are also provided for asbestos contamination in soil, for bonded ACM, FA and AF. As per the WA DoH (2009) guidelines, a 10 L sample is collected and screened manually on-site through a ≤ 7 mm sieve or spread out for inspection on a contrasting material for visual inspection. Any ACM/FA retained on the sieve (i.e. > 7 mm in size) is then analysed in the laboratory for bonded ACM, with results quantified in per cent weight by weight (%w/w). For FA/AF a separate sample of approximately 500 mL is collected, sieved in the laboratory and gravimetric determination of asbestos (< 7 mm) undertaken. The results are then compared to the NEPM HSLs. If the HSLs are not exceeded then no contamination management options are required provided the surface soil is free of visual asbestos. If results exceed the HSLs, further assessment, management and/or remediation is required.

The HSL for friable asbestos and asbestos fines (FA/AF) provided in the NEPM (2013) is 0.001% for all land use types. Current Australian methodologies for asbestos quantification, as outlined in Australian Standard AS4964 2004, *Method for Qualitative Identification of Asbestos in Bulk Samples*, indicate that the presence or absence of free (i.e. respirable) asbestos fibres can be determined with a LOR of 0.01%, an order of magnitude greater than the HSL. It is noted that laboratories typically report with a LOR of 0.001% for FA/AF, however due to the limitations with the method adopted it is possible that free respirable asbestos fibre contamination exists in samples at concentrations up to an order of magnitude greater than the reported detection limit. In the absence of a methodology with a more appropriate LOR, it is considered appropriate to compare analytical results obtained against the HSL, taking into consideration the limitations inherent in the method.

The Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) Technical Report No. 10, *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* (Friebel and

Nadebaum, 2011) provides HSLs for petroleum hydrocarbons specifically for vapour inhalation for intrusive maintenance workers in shallow trenches, and for direct contact. These have also been adopted.

7.2 ECOLOGICAL SCREENING LEVELS AND ECOLOGICAL INVESTIGATION LEVELS

The NEPM (2013) provides ecological screening levels (ESLs) for TRH and BTEX compounds, and ecological investigation levels (EILs) for selected metals and organic substances, for use as an initial screening risk assessment and are applicable for assessing risk to terrestrial ecosystems. The ESLs apply to different land use scenarios, and to coarse- and fine-grained soils. The EILs depend on specific soil physicochemical properties and land use scenarios. ESLs/EILs generally apply to the top 2 m of soil.

The NEPC, 2013 provides a protocol for deriving site specific Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a range of potential contaminants. The EILs take into consideration the physiochemical properties of soil and contaminants and the capacity of the local ecosystem to accommodate increases in the contaminant levels. Tables 1B(4) and 1B(5) of the NEPM (2013) provide generic EILs for aged arsenic and lead, and fresh DDT and naphthalene in soils (irrespective of their physiochemical properties). Aged values are applicable for contamination present in soil for at least two years which is considered appropriate. Site-specific EILs for chromium (III), copper, nickel and zinc can be calculated using the CSIRO Ecological Investigation Level Calculation Spreadsheet provided online in the ASC NEPM Toolbox (<http://www.scew.gov.au/node/941>). These calculations require an understanding of the cation exchange capacity (CEC), clay content and pH of the residual soil at the site. The following parameters were adopted based on measured or conservative values from sample location DPS_BH01_0.5:

- CEC of 10.1 cmolc/kg.
- pH of 7.4.
- clay content of 51%.
- organic carbon content of 0.1%, as a conservative approach.

Adopted ESLs and EILs are outlined in Table 7.1.

Table 7.1 Soil ecological assessment criteria

ANALYTE	ESLs ¹ (mg/kg)	EILs ² (mg/kg)
TRH/BTEXN compounds		
TRH F1	180	-
TRH >C ₁₀ -C ₁₆	120	-
TRH >C ₁₆ -C ₃₄	1,300	-
TRH >C ₃₄ -C ₄₀	5,600	-
Benzene	65	-
Toluene	105	-
Ethylbenzene	125	-
Xylene (total)	45	-
Naphthalene	-	170
PAHS		

ANALYTE	ESLs¹ (mg/kg)	EILs² (mg/kg)
Benzo(a)pyrene	0.7	-
METALS		
Arsenic	-	100
Chromium	-	690
Copper	-	65
Lead	-	1,100
Nickel	-	170
Zinc	-	480
DDT	-	180

(1) NEPM (2013) Schedule B1 Table 1B(6) ESLs for TPH Fractions F1 to F4, BTEX and benzo(a)pyrene in soil.

(2) NEPM (2013) Schedule B1 EILs for metals, DDT and naphthalene in soils.

8 RESULTS AND DISCUSSION

8.1 SUBSURFACE CONDITIONS

The subsurface conditions encountered beneath the investigation area mostly comprised of clayey sand topsoil underlain by silty clay or silty gravel fill to maximum depths of between 1.3 m bgl – 1.5 m bgl. No potential asbestos containing material was noted.

Fill was underlain by natural silty clay to depths of between 3.0 – 3.8 m bgl and siltstone to the maximum depth of investigation, 6.0 m bgl.

Environmental borehole logs are provided in Appendix F, and sampling locations are shown in Appendix A. Photographs of the boreholes are presented in Appendix E.

8.2 SOIL RESULTS SUMMARY

Selected soil samples were analysed for contaminants of concern. Soil samples were selected based on a combination of sample location (to provide coverage) and field observations (to target areas of potential concern).

The following sections provide a summary of the results of the soil investigation. More detailed summary tables of analytical results are provided in Appendix B, and laboratory reports are provided in Appendix C.

8.2.1 HIL/HSL EXCEEDANCES

All results for BTEXN, PAHs, phenols, OCPs and PCBs in soil were below the laboratory LORs, and therefore were below the adopted human health criteria for the site.

Concentrations of TRH and heavy metals were reported above the LORs but below the adopted human health criteria for the site.

Asbestos was also not observed during the investigation or identified within soil samples analysed.

8.2.2 ESL/EIL EXCEEDANCES

Reported concentrations of heavy metals, TRH, PAHs, BTEXN, Phenols, OPP, OCP and PCBs in soil were below the adopted ecological criteria for the site.

No vegetation stress was observed on site.

8.3 PRELIMINARY WASTE CLASSIFICATION

Material requiring off-site disposal should be assessed in accordance with the NSW EPA waste classification guidelines to determine the appropriate classification. The waste classification and disposal process in NSW involves the following six-step process:

Step 1: Determine whether the waste is special waste? (Note: asbestos is a special waste);

Step 2: Determine whether the waste is liquid waste;

Step 3: Determine whether the waste is pre-classified;

Step 4: Determine whether the waste possesses hazardous characteristics;

Step 5: Determine the waste's classification using chemical assessment; then

Step 6: Determine whether the waste is putrescible.

Waste classification criteria are presented in the NSW EPA (2014) *Waste Classification Guidelines – Part 1: Classifying waste*.

WSP has conducted a preliminary waste classification assessment based on results of the DSI, with the results outlined in the following sections. Waste classification tables are provided in Appendix B.

Concentrations of contaminants of concern were reported below the CT1 general solid waste criteria in all samples analysed. As such, the preliminary waste classification of fill material is general solid waste.

WSP considers additional sampling including toxicity characteristic leaching procedure (TCLP) analysis will be required for any soil which is proposed to be removed from the site. Preparation of a waste classification letter will also be required. The letter shall be used to seek pre-approval for disposal from the selected waste facility.

Sampling may be undertaken in situ, or ex situ via excavation and temporary stockpiling. The sampling density for material to be disposed of off-site will comprise (as a minimum) one sample per 25 m³ for less than or equal to 200 m³ of material. If larger volumes are to be generated for a single batch, then a minimum of ten samples are to be collected for up to 2,000 m³ to facilitate statistical analysis along with relevant quality assurance and quality control (QA/QC) samples. Waste classification samples are to be analysed for asbestos, TRH, BTEX compounds, PAHs, and heavy metals.

8.4 UPDATED CONCEPTUAL SITE MODEL

Table 8.1 provides an updated CSM, which has been revised based on the findings of the targeted DSI.

Table 8.1 Updated CSM

Likely sources of impact	Likely sources of impact at the site include: — uncontrolled fill materials used historically to raise or level portions of the site — historical or recent waste dumping — potential ACM or hazardous building materials from imported materials or demolished structures.
Potentially impacted media	Soil: — impacts from potentially contaminated fill, building debris or waste materials. Groundwater: — Vertical migration of chemicals present in soil into groundwater. This is considered unlikely given widespread soil contamination by chemical contaminants is not apparent based on the analytical results.
Contaminants of concern	Based on the soil laboratory results the revised contaminant of concerns for the site are considered to be: — uncontrolled fill materials.
Migration pathways	Potential migration pathways include: — airborne migration of contamination in dust or vapour — run-off via surface contaminants in rain water.

Exposure pathways	Potential exposure pathways include: — inhalation of dust or airborne fibres by site users or nearby site users — ingestion or dermal contact with contaminated surface soils or near surface soils by site users, nearby site users or excavation/maintenance workers. Exposure from contaminated groundwater has been discounted as part of the preliminary CSM due to: — the absence of gross soil contamination identified during this DSI — the absence of groundwater extraction bores in the vicinity of the site.
Sensitive receptors	Based on the site setting, sensitive receptors potentially include: — members of the public accessing the site, as it is currently publicly accessible — future open space users of the site — on-site and off-site construction or utility workers (those working within service pit trenches).

9 DATA VALIDATION

The DQIs for sampling techniques and laboratory analyses of collected representative soil samples define the acceptable level of error required for this investigation. The DQOs have been assessed by reference to the attributes presented in Table 9.1.

Table 9.1 Data quality indicators

DQI	DESCRIPTION	APPLICABILITY
Representativeness	The confidence that the data are representative of each media present on the site. Expresses the degree to which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Controlled through selecting sampling locations that exemplify site conditions and obtaining suitable samples.	Consistent and repeatable sampling techniques and methods were utilised. Shallow fill was suitably characterised at each investigation location as part of the sample and analysis program.
Precision	The quantitative measure of the variability (or reproducibility) of data. Expressed as RPDs between the original and duplicate samples tested. Validity of the data is questioned if the RPD limits are exceeded and upon further investigation a reason cannot be determined.	Work was conducted in accordance with WSP standard procedures. The precision of the data was assessed by calculating the RPDs of duplicate samples following AS 4482.1 (2005).
Accuracy	The quantitative measure of the closeness of reported data to the true values. Accuracy can be undermined by such factors as field contamination of samples, poor preservation or preparation techniques.	Accuracy was assessed by using equipment blanks and laboratory quality assurance / quality control (QA/QC) analytical results (including laboratory control samples, spikes, and reference samples).
Completeness	The measure of the amount of usable data from a data collection activity. Valid chemical data are the values that have been identified as acceptable or validated.	The completeness goal was set at there being sufficient valid data generated during the study. Measurements made were judged to be valid measurements.
Comparability	The confidence that data may be considered to be equivalent for each sampling analytical event, i.e. the confidence with which one data set can be compared with another. Achieved through qualitative assessment of QA/QC procedures, using comparable field sampling, laboratory sample preparation and analytical procedures and reporting units.	The sampling was in general accordance with the sampling and analysis procedures and as per standard industry procedures. Each sample was analysed using identical methods for each analyte and laboratory LORs were consistent over each laboratory batch. A check laboratory was used to provide data to make a comparative assessment of variability between laboratories.

Table 9.2 summarises conformance to specific QA/QC procedures.

Table 9.2 Data quality assurance

ITEM	OBJECTIVES MET
Environmental consultant	The environmental consultant maintains quality assurance systems certified to AS/NZS ISO 9001:2000. Qualified and experienced environmental scientists completed field works.
Procedures	All work was conducted in accordance with relevant statutory work health and safety (WHS) and environmental sampling guidelines, as well as standard company WHS and environmental field procedures. Standard field sampling sheets were used. Details recorded included WSP staff and contractors present, time on/off-site, weather conditions, calibration records and comments.
Sampling	Collection of samples was undertaken by appropriately qualified and experienced personnel following WSP standard field procedures which are based on industry accepted standard practice. Chain of custody documentation was used to ensure the integrity of samples from collection to receipt by the laboratory.
Field equipment	Equipment was serviced and calibrated as per the manufacturer requirements.
Equipment decontamination	Undertaken after each sampling episode where equipment used was not dedicated. A rinsate blank was collected by passing deionised water over decontaminated field equipment (trowel) and collecting it for analysis of contaminants of concern. All analytes in the rinsate blank were below LORs. Field sampling procedures conformed to WSP QA/QC protocols to prevent cross-contamination, preserve sample integrity, and allow for collection of a suitable data set from which to make technically sound and justifiable decisions with data of satisfactory usability. QA/QC sample results are presented in in Appendix B and C.
Transportation	Samples were stored in chilled coolers on-site and during transport via courier to the laboratory. A chain of custody form was completed on-site and sent with the samples. The laboratory confirmed receipt of the samples and specified the condition on delivery and the scheduled analyses. All analytes in the trip blank were below LORs. Appropriate holding times were met.
Field QA/QC	QA/QC sampling was undertaken to industry standard procedures including collection and analysis of intra-laboratory. Field and laboratory acceptable limits are as stated by AS 4482.1-1997. Non-compliances have been documented in Section 10 of this report.
Laboratory analysis	Analysis was carried out by laboratories with NATA certification for the required analyses with the exception of asbestos quantification. Detection limits were sufficient to enable comparison against the appropriate guidelines. All LORs were less than the adopted assessment criteria.
Acceptable limits for QA/QC samples	Primary laboratory QA/QC acceptance limits for recovery of surrogates, control samples and matrix spikes to be 70% to 130% for organics and 80% to 120% recovery for inorganics and waters. All method blanks to be less than LORs.
Reporting	Report generally complies with the NEPM (2013).

10 FIELD QA/QC

The following sections discuss the field QA/QC program. Summary tables of QA/QC results are provided in Appendix B, and the results for internal and external QA/QC procedures are provided within the laboratory analysis reports in Appendix C.

10.1 FIELD RESULTS

10.1.1 BLIND DUPLICATES

The field QA/QC soil sampling program for the sample batch comprised collection and analysis intra laboratory duplicate QC101 and inter laboratory duplicate QC101A of primary sample DPS_HA03_0.1, for TRH and BTEXN compounds, PAHs and heavy metals.

No field duplicate analysis was undertaken for asbestos quantification. The purpose of collecting duplicate samples is to measure the potential for inaccuracy in sample results due to field or laboratory procedures. Analysis of anonymised duplicate samples by the primary and secondary laboratories serves to determine the degree to which sample analyses which should provide identical results do, in fact, provide them. The way this is measured is through the calculation of RPDs.

For contaminants which are discrete within the matrix being sampled, such as asbestos in bonded or fibre form in soil, the duplication of a particular sample does not logically support the objective of duplicate sampling. Chemical contaminants tend, through a variety of processes, to diffuse towards homogeneous concentrations. However, as asbestos contamination represents foreign bodies present in the soil which do not diffuse except through mechanical mixing there is no logical expectation of similar quantities in any two discrete samples, even two samples split from one larger one. Therefore, the results of the analyses of two such samples should not be expected to adhere to the same RPD criteria by which chemical contaminants are measured.

10.1.1.1 RPDs

RPDs were calculated for the primary and duplicate samples for assessment of the data quality, in particular for assessment of the reproducibility of the analytical data measurements or 'precision' given the adopted field and laboratory methods.

The RPDs were calculated using the formula below, and the results are presented in Appendix B.

$$RPD\% = \frac{|Ro - Rd|}{|(Ro + Rd) / 2|} \times 100\%$$

Where Ro is the primary sample and Rd is the primary duplicate.

The RPD values were compared to the RPD acceptance criterion outlined in Table 9.2 and in general accordance with Australian Standard AS 4482.1 (for non- and semi-volatiles in soil) and NEPM (2013) Schedule B3. For volatile compounds no published RPD acceptance criteria exists, however RPDs of <100% are considered acceptable where concentrations are at least 10 times the LOR. RPDs for results less than the LOR were not calculated. In instances where results were greater than the LOR for the one sample, but below LOR for the corresponding primary or duplicate sample, a result equal to the LOR was adopted in order to calculate an RPD.

RPD exceedances were reported as follows:

- copper for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)
- lead for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)

- nickel for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)
- nickel for primary sample DPS_HA03_0.1 and inter-laboratory duplicate (QA01A)
- zinc for primary sample DPS_HA03_0.1 and intra-laboratory duplicate (QA01)

All other RPDs were considered to be acceptable.

It is considered that the RPD exceedances listed above are attributable to the heterogeneous nature of the fill encountered. Results were all in the same order of magnitude and none of the concentrations detected in either the primary or duplicate samples analysed exceeded the adopted assessment criteria. The degree of variance shown in the duplicate results would not indicate potential exceedances for other samples in the dataset. The elevated RPDs are, therefore, not considered to affect the conclusions of this report.

10.1.2 RINSATE

A rinsate blank was collected and analysed for TRH, BTEXN and PAHs. These analytes were not detected in the samples, suggesting the sampling protocol did not result in cross-contamination of the samples.

Results for the rinsate samples are presented in Appendix B.

10.1.3 TRIP SPIKE AND TRIP BLANK

A trip blank sample accompanied samples to the laboratory and analysed for TRH and BTEXN. These analytes were not detected in the trip blank, suggesting no cross contamination occurred during transportation.

Trip spike recovery indicated loss of volatiles occurred at an acceptably low level.

10.2 SUMMARY OF QA/QC RESULTS

WSP considers that the sample collection, documentation, handling, storage and transportation procedures utilised are of an acceptable standard and the analytical results provided by the laboratories are deemed reliable and complete, therefore the data are considered fit for purpose.

It is considered that the QA/QC procedures and results were acceptable and that the conclusions of the report have not been significantly affected by the sampling or analytical procedures. Based on the results of laboratory QA/QC samples and the sampling and handling procedures used for the collection and analysis of soil, the data were considered representative and appropriate for use in this assessment.

11 CONCLUSIONS

This targeted DSI report has been prepared to accompany a Review of Environmental Factors (REF) prepared for the Department of Education (DoE) relating to the Dalmeny Public School Upgrade (the activity) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI).

The DSI is required to assess soil conditions to inform the proposed upgrade of the site. It is understood that the upgrade of the site involves removal of demountable teaching spaces and construction of permanent teaching spaces. The intrusive investigation area comprises the proposed development area located in the south western portion of the site.

The objectives of the DSI were to identify impacts from potential contaminants of concern and provide recommendations for management of those impacts if required. Site is currently in use as a primary school and will continue to be utilised as a primary school.

The results of the investigation indicated the following:

- Based on a review of historical information, the site was historically utilised for agricultural purposes since circa 1947. One large agricultural building was located partially within the north western corner of the site circa 1965 - 1978. Development of the Dalmeny Primary School structures and utilisation of the site for primary school purposes commenced circa 2003. Other than the addition of site structures, primarily demountables, no significant changes to the site have occurred since development of the primary school. The areas surrounding the site have generally comprised residential properties since circa 1965.
- The subsurface conditions encountered beneath the site mostly comprised of clayey sand topsoil underlain by silty clay or silty gravel fill to maximum depths of between 1.3 m bgl – 1.5 m bgl. No potential asbestos containing material was noted. Fill was underlain by natural silty clay to depths of between 3.0 – 3.8 m bgl and siltstone to the maximum depth of investigation, 6.0 m bgl.
- No concentrations of TRH, PAH, BTEXN, OCPs, heavy metals, phenols or PCBs were reported above the adopted assessment criteria for the protection of human health based on the proposed continued use of the site for a primary school. Asbestos was not reported in soil samples analysed and was not observed during the investigation.
- Concentrations of contaminants of concern were below the ecological criteria for urban residential and open spaces. No vegetation stress was observed on site.
- Asbestos was not reported in soil samples analysed and was not observed during the investigation. However, the fill material has previously been observed to have inclusions of brick, plastic, wood and gravel (WSP, 2023).

Based on the findings of this DSI, WSP has not identified any soil conditions that would preclude the use of the site for continued use as a primary school and for the planned development. It should be noted contamination might be present at other areas of the site. The potential for unexpected finds to be encountered during construction earthworks should be managed during the development works under an unexpected finds protocol (noting that inclusions of brick, plastic, wood and gravel were recorded within fill material during the 2023 DSI).

12 RECOMMENDATIONS

Based on the findings of this assessment WSP recommends the following:

- A Construction Environmental Management Plan (CEMP) including an unexpected finds protocol should be developed and followed during the proposed development works.
- The Department of Education Asbestos Management Plan (AMP) for NSW Government Schools shall continue to be followed after the development works.

12.1 MITIGATION MEASURES

Required mitigation measures are detailed in Table 12.1.

Table 12.1 Mitigation Measures

Mitigation Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
CEMP	During development works	Follow CEMP and unexpected finds protocol	Provide guidance in the event of an unexpected find.
AMP	Prior to, during and following development works.	Follow AMP	Provide guidance during works near or with potential ACM.

12.2 EVALUATION OF ENVIRONMENTAL IMPACTS

The impacts of the activity can be adequately mitigated or minimised through the required mitigation measures such that the activity will not have a significant effect on the environment.

13 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (WSP) for NSW Department of Education (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 11 November 2024 and agreement with the Client dated 5 December 2024 (Agreement).

13.1 PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (*Permitted Purpose*).

13.2 QUALIFICATIONS AND ASSUMPTIONS

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (*Conclusions*) are based in whole or in part on information provided by the Client and other parties identified in the report (*Information*), those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

WSP has prepared the Report without regard to any special interest of any person other than the Client when undertaking the services described in the Agreement or in preparing the Report.

13.3 USE AND RELIANCE

This Report should be read in its entirety and must not be copied, distributed or referred to in part only. The Report must not be reproduced without the written approval of WSP. WSP will not be responsible for interpretations or conclusions drawn by the reader. This Report (or sections of the Report) should not be used as part of a specification for a project or for incorporation into any other document without the prior agreement of WSP.

WSP is not (and will not be) obliged to provide an update of this Report to include any event, circumstance, revised Information or any matter coming to WSP's attention after the date of this Report. Data reported and Conclusions drawn are based solely on information made available to WSP at the time of preparing the Report. The passage of time; unexpected variations in ground conditions; manifestations of latent conditions; or the impact of future events (including (without limitation) changes in policy, legislation, guidelines, scientific knowledge; and changes in interpretation of policy by statutory authorities); may require further investigation or subsequent re-evaluation of the Conclusions.

This Report can only be relied upon for the Permitted Purpose and may not be relied upon for any other purpose. The Report does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial commitment or otherwise. It is the responsibility of the Client to accept (if the Client so chooses) any Conclusions contained within the Report and implement them in an appropriate, suitable and timely manner.

In the absence of express written consent of WSP, no responsibility is accepted by WSP for the use of the Report in whole or in part by any party other than the Client for any purpose whatsoever. Without the express written consent of WSP, any use which a third party makes of this Report or any reliance on (or decisions to be made) based on this Report is at the sole risk of those third parties without recourse to WSP. Third parties should make their own enquiries and obtain independent advice in relation to any matter dealt with or Conclusions expressed in the Report.

13.4 DISCLAIMER

No warranty, undertaking or guarantee whether expressed or implied, is made with respect to the data reported or the Conclusions drawn. To the fullest extent permitted at law, WSP, its related bodies corporate and its officers, employees and agents assumes no responsibility and will not be liable to any third party for, or in relation to any losses, damages or expenses (including any indirect, consequential or punitive losses or damages or any amounts for loss of profit, loss of revenue, loss of opportunity to earn profit, loss of production, loss of contract, increased operational costs, loss of business opportunity, site depredation costs, business interruption or economic loss) of any kind whatsoever, suffered on incurred by a third party.

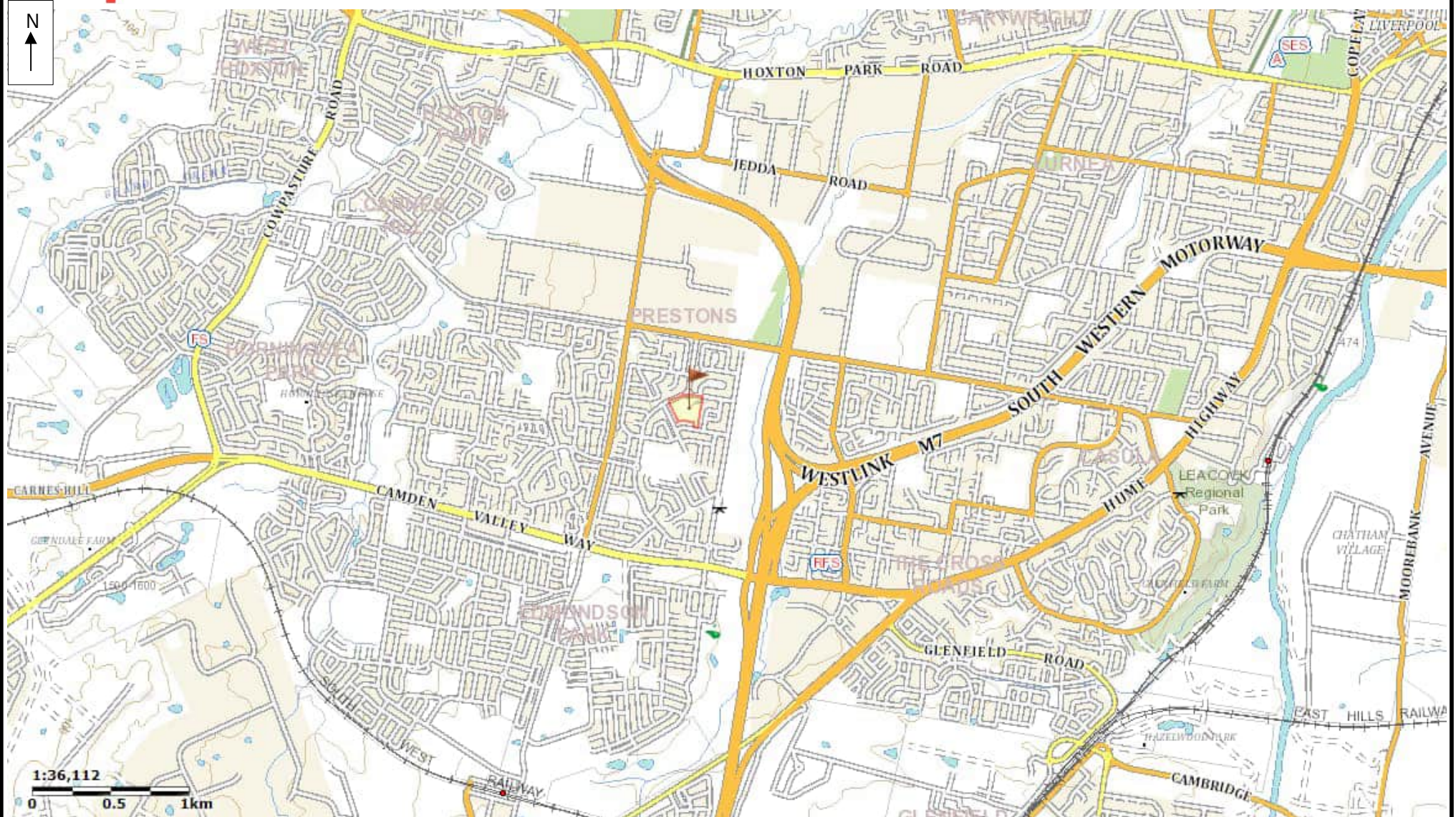
REFERENCES

- Australian Standard AS4964 2004, Method for Qualitative Identification of Asbestos in Bulk Samples.
- Australian Government, Geoscience Australia Portal <https://portal.ga.gov.au/>.
- Friebe & Nadebaum, 2011, *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater*, Part 2: Application Document
- Geological Survey of N.S.W, Department of Minerals and Energy, 1991, *Penrith, Geological Sheet Series 9030* (Edition 1), Geological Survey of NSW
- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013).
- NSW Department of Education School infrastructure, *Request for Tender*, Attachment 4 Project Description, Schofields Public School Upgrade
- NSW EPA 2017, Guidelines for the NSW Site Auditor Scheme (3rd Edition).
- NSW EPA 1995, *Sampling Design Guidelines*.
- NSW Office of Environment and Heritage 2011, *Guidelines for Consultants Reporting on Contaminated Sites*.
- NSW EPA 2014, *Waste Classification Guidelines*, Part 1: Classifying Waste.
- NSW EPA Contaminated land record database <<http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>>
- NSW EPA Protection of the Environment Operations Act 1997 public register <<http://www.epa.nsw.gov.au/prpoeoapp/>>
- NSW Government Water Information website, <<http://allwaterdata.water.nsw.gov.au/water.stm>>
- Greencap (2017), *Asbestos Register, Dalmeny Public School (4634)*, 13 December 2017
- State of New South Wales, MinView V2022.8.3, Mapbox, 2022.<https://minview.geoscience.nsw.gov.au>.
- WSP, 2023, Targeted Detailed Site Investigation, Dalmeny Public School Upgrade, 1 November 2023

APPENDIX A

FIGURES





Legend

Site boundary

Image Source – Six Maps 2023

Figure 1
Site location plan



Legend

- Investigation area boundary
- Site boundary
- Contamination borehole
- Geotechnical and Contamination Borehole

30m



Image Source – Nearmap May 2023

SINSW

Figure 2
Site layout plan

www.wsp.com



Legend

- ▬ Site boundary
- ▬ Investigation area boundary
- ⊗ Previous Geotechnical Assessment Location
- ⊗ Previous Environmental Assessment Location
- ⊕ Contamination borehole
- ⊕ Geotechnical and Contamination Borehole

30m



Image Source – Nearmap May 2023

SINSW

Figure 3
Sample location plan

APPENDIX B

ANALYSIS SUMMARY TABLES



Table 1 - Analytical Results

	Total Petroleum Hydrocarbons												BTEXN															
	TRH-GS - C3 Fraction	TRH-CLD - C14 Fraction	TRH-CL5 - C28 Fraction	TRH-C29 - C36 Fraction	TRH-CLD - C36 (Sum of total) (Lab Reported)	TRH-CLD - C40 (Sum of total) (Lab Reported)	TRH-GS - C10 Fraction F1	TRH-GS - C10 Fraction Less BTEX F1	TRH-XCLD - C16 Fraction F2	TRH-XCLD - C16 Fraction Less Naphthalene F2	TRH-XCL6 - C24 Fraction F3	TRH-XC24 - C40 Fraction F4	Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Naphthalene (VOC)	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (lower bound)	Benzo(a)pyrene TEQ (median bound)	
	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
EQL	10	20	50	50	50	50	10	10	50	50	100	100	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.2		0.5	0.5					
AUS CRC CARE 2011 HSLs Intrusive Maintenance Worker Direct Contact							82,000		62,000		85,000	120,000	1,100	120,000	85,000			130,000	29,000									
AUS CRC CARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY >=0m, <2m													350															
NEPM 2013 Table 1A(1) Hills Res A Soil																										3	3	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay >=0m, <1m								50	280				0.7	480				110	5									
>=1m, <2m								90					1					310										
>=2m, <4m								150					2															
>=4m								290					3															
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			170									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil >=0m, <2m								180	120	120	1300	5,600	65	105	125			45							0.7			
Field ID	Depth	Date	Lab Report Number																									
DPS_BH01_0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_BH02_0.1	0.5	14/01/2025	ES2502103	<10	<50				<10	<10			<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_BH03_0.1	0.5	14/01/2025	ES2502103	<10	<50	150	160	310	280		60	60	220	<10	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA01_0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA02_0.1	1.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA03_0.1	2	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA04_0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA05_0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
DPS_HA06_0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
QC101	0.1	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<10	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	
QC101	0.1	14/01/2025	1181226	<10	<50	62	66	128	110	<10	<10	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	

Environmental Standards
2013, NEPM 2013 Table 1A(1) Hills Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical Results

	Polycyclic aromatic hydrocarbons													Heavy Metals										Phenolics					
	benzodipylene TEQ (upper bound)	benzo(a)fluoranthene	benzo(b)fluoranthene	benzo(k)fluoranthene	chrysene	dibenz(a,h)anthracene	fluoranthene	fluorene	indeno(1,2,3-c,d)pyrene	naphthalene	phenanthrene	pyrene	PAH (Sum of Common 16 PAHs - Lab Reported)	arsenic	cadmium	chromium (trivalent)	copper	lead	mercury	nickel	zinc	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3,4-methylphenol	cresols (sum of total)		
	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		
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.4	2	5	5	0.1	2	5	0.5	5	0.5	1	1	0.5		
AUS CRC CARE 2011 HSLs Intrusive Maintenance Worker Direct Contact										29,000																			
AUS CRC CARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																													
>=0m, <2m																													
NEPM 2013 Table 1A(1) HSLs Res A Soil	3												300	100	20		6,000	300	40	400	7,400			400		400	400		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay										5																			
>=0m, <1m										5																			
>=1m, <2m																													
>=2m, <4m																													
>=4m																													
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space										170				100		690	65	1,100		170	480								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																													
>=0m, <2m																													
Field ID	Depth	Date	Lab Report Number																										
DPS_BH01_0.5	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8	<1	24	37	26	<0.1	12	57	-	-	-	-	-	-		
DPS_BH02_0.1	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<1	13	25	16	<0.1	10	59	-	-	-	-	-	-		
DPS_BH03_0.1	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	17	22	20	<0.1	11	95	-	-	-	-	-	-		
DPS_HA01_0.5	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<1	20	44	22	<0.1	13	65	-	-	-	-	-	-		
DPS_HA02_0.1	1.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	9	13	11	<0.1	6	49	<0.5	<5	<0.5	<0.5	<0.5	<0.5		
DPS_HA03_0.1	2	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	18	29	20	<0.1	14	64	-	-	-	-	-	-		
DPS_HA04_0.5	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9	<1	20	28	26	<0.1	11	51	-	-	-	-	-	-		
DPS_HA05_0.5	0.5	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	13	<1	28	19	25	<0.1	9	34	-	-	-	-	-	-		
DPS_HA06_0.5	0.5	15/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	14	41	29	<0.1	14	80	-	-	-	-	-	-		
QC101	0.1	14/01/2025	ES2502103	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	12	14	11	<0.1	6	35	-	-	-	-	-	-		
QC101	0.1	14/01/2025	1181226	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.4	15	21	15	<0.1	8.4	49	-	-	-	-	-	-		

Environmental Standards
2013, NEPM 2013 Table 1A(1) HSLs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical Results

	Organochlorine Pesticides																											
	Phenol	Non-halogenated Phenols (Sum of total)	4,4'-DDD	4,4'-DDE	4,4'-DDT	p,p'-HCH	Aldrin	Aldrin and Dieldrin (Total)*	p,p'-HCH	Chlordane - Total	DDT + DDE + DDD (Total)*	4-HCH	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	p,p'-HCH (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Dichloros	Disinfectant S-methyl	Monocrotophos	Dimethoate	
EQL	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	
AUS CRC CARE 2011 HSLs Intrusive Maintenance Worker Direct Contact	0.5	20	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.2	0.05
AUS CRC CARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY >=0m, <2m																												
NEPM 2013 Table 1A(1) Hills Res A Soil	3,000						6			50	240		6	270	270		10				6		300					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay >=0m, <1m																												
>=1m, <2m																												
>=2m, <4m																												
>=4m																												
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space											180																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil >=0m, <2m																												
Field ID	Depth	Date	Lab Report Number																									
DPS_BH01_0.5	0.5	14/01/2025	ES2502103		-	-	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.2	< 0.05	
DPS_BH02_0.1	0.5	14/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_BH03_0.1	0.5	14/01/2025	ES2502103		-	-	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.2	< 0.05	
DPS_HA01_0.5	0.5	14/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA02_0.1	1.5	14/01/2025	ES2502103		< 0.1	< 0.1	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.2	< 0.05	
DPS_HA03_0.1	2	14/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA04_0.5	0.5	14/01/2025	ES2502103		-	-	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.2	< 0.05	
DPS_HA05_0.5	0.5	14/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA06_0.5	0.5	15/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	ES2502103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) Hills Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical Results

	Organophosphorus Pesticides															Polychlorinated Biphenyls	Halogenated Benzenes	Phenolics-Halogenated							
	Diazinon	Chlorpyrifos-methyl	Parathion-methyl	Malathion	Fenitrothion	Chlorpyrifos	Parathion	Prinphos-ethyl	Chlorfenvinphos	Bromophos-ethyl	Fenamiphos	Prothiofos	Ethion	Carbofenthothion	Azinphos Methyl	PCB (Sum of Total Lab Reported)	Hexachlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Chlorophenol	4-Chloro-3-methylphenol	Perfluorophenol	Halogenated Phenols (Sum of Total)
	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
EQL	0.05	0.05	0.2	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	1	1	0.5	0.5	0.5	1	1	1
AUS CRC CARE 2011 HSLs Intrusive Maintenance Worker Direct Contact																									
AUS CRC CARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY																									
>=0m, <2m																									
NEPM 2013 Table 1A(1) HILs Res A Soil																1	10							100	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																									
>=0m, <1m																									
>=1m, <2m																									
>=2m, <4m																									
>=4m																									
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																									
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																									
>=0m, <2m																									
Field ID	Depth	Date	Lab Report Number																						
DPS_BH01_0.5	0.5	14/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	-	-	-	-	-	-	-	-
DPS_BH02_0.1	0.5	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_BH03_0.1	0.5	14/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	-	-	-	-	-	-	-	-
DPS_HA01_0.5	0.5	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA02_0.1	1.5	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1
DPS_HA03_0.1	2	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA04_0.5	0.5	14/01/2025	ES2502103	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	-	-	-	-	-	-	-	-
DPS_HA05_0.5	0.5	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DPS_HA06_0.5	0.5	15/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 1 - Analytical Results

	Asbestos											
	Asbestos Containing Material (ac 15% Asbestos in PCM >7mm)	Asbestos (Fines and Fibrous <7mm)	Asbestos (Fines and Fibrous <7mm) (FA-4F)	Weight Used for % Calculation	Fibrous Asbestos >7mm	Asbestos Containing Material	Asbestos Detected	Asbestos Type	Sample weight (dry)			
	% (w/w)	g	% (w/w)	kg	g	g	g/kg	-	g			
	0.01	0.0004	0.001	0.0001	0.0004	0.1	0.1	-	0.01			
EQL												
AUS CRC CARE 2011 HSLs Intrusive Maintenance Worker Direct Contact												
AUS CRC CARE 2011 HSLs Shallow Trench Worker Vapour Intrusion - CLAY												
>=0m, <2m												
NEPM 2013 Table 1A(1) Hills Res A Soil	0.01		0.001									
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay												
>=0m, <1m												
>=1m, <2m												
>=2m, <4m												
>=4m												
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil												
>=0m, <2m												
Field ID	Depth	Date	Lab Report Number									
DPS_BH01_0.5	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.257	<0.0004	<0.1	-	-	-
DPS_BH02_0.1	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.198	<0.0004	<0.1	-	-	-
DPS_BH03_0.1	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.331	<0.0004	<0.1	-	-	-
DPS_HA01_0.5	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.356	<0.0004	<0.1	-	-	-
DPS_HA02_0.1	1.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.198	<0.0004	<0.1	-	-	-
DPS_HA03_0.1	2	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.257	<0.0004	<0.1	-	-	-
DPS_HA04_0.5	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.336	<0.0004	<0.1	-	-	-
DPS_HA05_0.5	0.5	14/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.337	<0.0004	<0.1	-	-	-
DPS_HA06_0.5	0.5	15/01/2025	ES2502103	<0.01	<0.0004	<0.001	0.401	<0.0004	<0.1	-	-	-
QC101	0.1	14/01/2025	ES2502103	-	-	-	-	-	-	-	-	-
QC101	0.1	14/01/2025	1181226	-	-	-	-	-	-	-	-	-

Environmental Standards

2013, NEPM 2013 Table 1A(1) Hills Res A Soil

2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay

2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil

Table 2 - Waste Classification Results

				Total Petroleum Hydrocarbons												BTEXN															
				RH-C6 - C9 Fraction	RH-C10 - C14 Fraction	RH-C15 - C28 Fraction	RH-C29 - C36 Fraction	TRH-C10 - C36 (Sum of total) (Lab Reported)	RH-C10 - C40 (Sum of total) (Lab Reported)	TRH-C6 - C10 Fraction F1	RH-C6 - C10 Fraction Less BTEX F1	RH-C10 - C16 Fraction F2	RH-C10 - C16 Fraction Less Naphthalene F2	RH-C16 - C34 Fraction F3	RH-C34 - C40 Fraction F4		Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Naphthalene (VOC)	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)pyrene		
				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
EQL				10	20	50	50	50	50	10	10	50	50	100	100		0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.2		0.5	0.5	0.5	0.5	0.5	
General Solid Waste CT1				650				10000									10	288	600			1000								0.8	
Restricted Solid Waste CT2				2600				40000									40	1152	2400			4000								3.2	
Field ID	Depth	Date	Lab Report Number																												
DPS BH01 0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS BH02 0.1	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS BH03 0.1	0.5	14/01/2025	ES2502103	<10	<50	150	160	310	280	<10	<10	60	60	220	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA01 0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA02 0.1	1.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA03 0.1	2	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA04 0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA05 0.5	0.5	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
DPS HA06 0.5	0.5	15/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
QC101	0.1	14/01/2025	ES2502103	<10	<50	<100	<100	<50	<50	<10	<10	<50	<50	<100	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
QC101	0.1	14/01/2025	1181226	<10	<50	62	66	128	110	<10	<10	<50	<50	110	<100		<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 2 - Waste Classification Results

		Polycyclic aromatic hydrocarbons															Heavy Metals									
		Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	Benzo(b,k,l)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAH (Sum of Common 16 PAHs - Lab Reported)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	2,4-Dimethylphenol	2,4-Dinitrophenol
		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
EQL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.4	2	5	5	0.1	2	5	0.5	5
General Solid Waste CT1																200	100	20	100	5	100	4	40			
Restricted Solid Waste CT2																800	400	80	400		400	16	160			

Field ID	Depth	Date	Lab Report Number																							
DPS_BH01_0.5	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8	<1	24	37	26	<0.1	12	57	-	-
DPS_BH02_0.1	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5	<1	13	25	16	<0.1	10	59	-	-
DPS_BH03_0.1	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	17	22	20	<0.1	11	95	-	-
DPS_HA01_0.5	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<1	20	44	22	<0.1	13	65	-	-
DPS_HA02_0.1	1.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	9	13	11	<0.1	6	49	<0.5	<0.5
DPS_HA03_0.1	2	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	18	29	20	<0.1	14	64	-	-
DPS_HA04_0.5	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9	<1	20	28	26	<0.1	11	51	-	-
DPS_HA05_0.5	0.5	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	13	<1	28	19	25	<0.1	9	34	-	-
DPS_HA06_0.5	0.5	15/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7	<1	14	41	29	<0.1	14	80	-	-
QC101	0.1	14/01/2025	ES2502103	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<1	12	14	11	<0.1	6	35	-	-
QC101	0.1	14/01/2025	1181226	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.4	15	21	15	<0.1	8.4	49	-	-

Table 2 - Waste Classification Results

	Phenolics						Organochlorine Pesticides																		
	2-Methylphenol	2-Nitrophenol	2, 4-Methylphenol	Cresols (Sum of total)	Phenol	Non-Halogenated Phenols (Sum of total)	4,4'-DDD	4,4'-DDE	4,4'-DDT	p-HCH	Aldrin	Aldrin and Dieldrin (Total)*	p-HCH	Dichloranes - Total	DDT + DDE + DDD (Total)*	p-HCH	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Dieldrin	Dieldrin aldehyde	Dieldrin ketone	p-HCH (Lindane)	Heptachlor
	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
EOL	0.5	1	1	0.5	0.5	20	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
General Solid Waste CT1				4,000		288												60	60	60					
Restricted Solid Waste CT2				16,000		1,152												240	240	240					

[illegible]

Table 2 - Waste Classification Results

[illegible]

Table 2 - Waste Classification Results

	Phenolics-Halogenated								Asbestos
	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Chlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	Halogenated Phenols (Sum of total)	Asbestos (Fines and Fibrous Asbestos (FA+AF))
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	% (w/w)
EQ1	1	1	0.5	0.5	0.5	1	1	1	
General Solid Waste CT1	8,000	40							
Restricted Solid Waste CT2	2,400	160							

[illegible]

Table 3 - Duplicate results

		Field ID	DPS_HA03_0.1	QA01	RPD	DPS_HA03_0.1	QA01A	RPD
		Matrix Type	Soil	Soil		Soil	Soil	
		Date	14 Jan 2025	14 Jan 2025		14 Jan 2025	14 Jan 2025	
		Lab Report Number	ES2502103	ES2502103		ES2502103	1181226	
	Unit	EQL						
BTEXN								
Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.2	0
Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0
Xylenes (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.5	0
Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0
Xylenes (Sum of total) (Lab Reported)	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.5	0
Naphthalene (VOC)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<1	0
Total BTEX	mg/kg	0.2	-	-	-	-	<0.2	-
Total Petroleum Hydrocarbons								
TRH C6 - C9 Fraction	mg/kg	10	<20	<20	0	<20	<10	0
TRH C10 - C14 Fraction	mg/kg	20	<20	<20	0	<20	<50	0
TRH C15 - C28 Fraction	mg/kg	50	<50	<50	0	<50	62	-
TRH C29 - C36 Fraction	mg/kg	50	<50	<50	0	<50	66	-
TRH+C10 - C36 (Sum of total) (Lab Reported)	mg/kg	50	<50	<50	0	<50	128	-
TRH+C10 - C40 (Sum of total) (Lab Reported)	mg/kg	50	<100	<100	0	<100	110	-
TRH C6 - C10 Fraction F1	mg/kg	10	<20	<20	0	<20	<10	0
TRH C6 - C10 Fraction Less BTEX F1	mg/kg	10	<20	<20	0	<20	<10	0
TRH >C10 - C16 Fraction F2	mg/kg	50	<50	<50	0	<50	<50	0
TRH >C10 - C16 Fraction Less Naphthalene F2	mg/kg	50	<50	<50	0	<50	<50	0
TRH >C16 - C34 Fraction F3	mg/kg	100	<100	<100	0	<100	110	-
TRH >C34 - C40 Fraction F4	mg/kg	100	<100	<100	0	<100	<100	0
Polycyclic aromatic hydrocarbons								
Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (lower bound)*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (medium bound)*	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0
Benzo(a)pyrene TEQ (upper bound)*	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0
Benzo(b)&(j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Naphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
PAH (Sum of Common 16 PAHs - Lab Reported)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Heavy Metals								
Arsenic	mg/kg	2	7	<5	-	7	6.2	12
Cadmium	mg/kg	0.4	<1	<1	0	<1	<0.4	0
Chromium	mg/kg	2	18	12	40	18	15	18
Copper	mg/kg	5	29	14	70	29	21	32
Lead	mg/kg	5	20	11	58	20	15	28.5
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Nickel	mg/kg	2	14	6	80	14	8.4	50
Zinc	mg/kg	5	64	35	59	64	49	27

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 50 (1 - 10 x EQL); 50 (10 - 30 x EQL); 50 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 4 - Trip blank and trip spike

				BTEXN								Total Petroleum Hydrocarbons		
				Benzene	Toluene	Ethylbenzene	Xylenes (m & p)	Xylene (o)	Xylenes (Sum of total) (Lab Reported)	Sum of BTEX	Naphthalene (VOC)	RH C6 - C9 Fraction	RH C6 - C10 Fraction F1	RH C6 - C10 Fraction less BTEX F1
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		
EQ1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	1	20	20	20			
Field ID	Matrix Type	Date	Lab Report Number											
Trip Blank	Soil	14 Jan 2025	ES2502103	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<10	<10	<10
Trip Spike	Soil	14 Jan 2025	ES2502103	<0.2	2.3	3.4	3.8	1.7	5.5	11.2	<1	-	-	-
Trip Spike Control	Soil	14 Jan 2025	ES2502103	<0.2	2.3	3.3	3.7	1.6	5.3	10.9	<1	-	-	-
Recovery	Soil	14 Jan 2025	ES2502103	-	100%	97%	97%	94%	96%	97%	-	-	-	-

Table 5 - Rinsate Bank

				Total Petroleum Hydrocarbons										Heavy Metals									
				TRH C6 - C9 Fraction	TRH C10 - C14 Fraction	TRH C15 - C28 Fraction	TRH C29 - C36 Fraction	TRH C10 - C36 (Sum of total) (Lab Reported)	TRH C10 - C40 (Sum of total) (Lab Reported)	TRH C6 - C10 Fraction F1	TRH C6 - C10 Fraction Less BTEX F1	TRH >C10 - C16 Fraction F2	TRH >C10 - C16 Fraction Less Naphthalene F2	TRH >C16 - C34 Fraction F3	TRH >C34 - C40 Fraction F4	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.02	0.05	0.1	0.1	0.1	0.1	0.02	0.02	0.05	0.05	0.1	0.1	0.001	0.0002	0.001	0.001	0.001	0.0001	0.001	0.005
Field ID	Matrix Type	Date	Lab Report Number																				
RINSATE 1	Water	15 Jan 2025	ES2502103	<0.02	<0.05	<0.1	<0.1	<0.1	<0.1	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005

APPENDIX C

LABORATORY REPORTS





CERTIFICATE OF ANALYSIS

Work Order : **ES2502103**
Amendment : **2**
Client : **WSP Australia Pty Ltd**
Contact : **MELINDA COLLIER**
Address : **LEVEL 27 680 GEORGE STREET**
SYDNEY 2000
Telephone : **+61 02 9272 5183**
Project : **PS206292 School of Infrastructure NSW**
Order number : **PS206292**
C-O-C number : **----**
Sampler : **GRACE BENDALL-PEASE, MACKENZIE WEEKS**
Site : **----**
Quote number : **EN/000**
No. of samples received : **84**
No. of samples analysed : **25**

Page : 1 of 33
Laboratory : Environmental Division Sydney
Contact : Sepan Mahamad
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 15-Jan-2025 17:21
Date Analysis Commenced : 28-Jan-2025
Issue Date : 18-Feb-2025 11:13



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
- Descriptive 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
Alana Smylie	Team Leader - Asbestos	Newcastle - Inorganics, Mayfield West, NSW
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- 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.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- 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.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EP080: Samples not received in a suitable time frame to conduct the analysis within the recommended holding time.
- Amendment (06/02/2025): This report has been amended and re-released to allow the reporting of additional analytical data for sample #57 to match the CoC.
- Amendment (13/02/2025): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EA200N for sample 020, 042, 051.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres



- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- 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^+ + Al^{3+}).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EA200: N/A - Not Applicable



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)									
pH Value	----	0.1	pH Unit		7.4	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		19.0	15.0	16.6	17.2	11.2
EA150: Soil Classification based on Particle Size									
Clay (<2 µm)	----	1	%		51	----	----	----	----
EA152: Soil Particle Density									
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3		2.46	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Sample weight (dry)	----	0.01	g		252	196	331	256	296
Synthetic Mineral Fibre	----	-	--		No	No	No	No	No
Organic Fibre	----	-	--		No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--		J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	B.SCHRADER
EA200N: Asbestos Quantification (non-NATA)									
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)		<0.001	<0.001	<0.001	<0.001	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g		<0.1	<0.1	<0.1	<0.1	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)		<0.01	<0.01	<0.01	<0.01	<0.01
ø Weight Used for % Calculation	----	0.0001	kg		0.252	0.196	0.331	0.256	0.296
ø Fibrous Asbestos >7mm	----	0.0004	g		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ED006: Exchangeable Cations on Alkaline Soils									
ø Exchangeable Calcium	----	0.2	meq/100g		5.4	----	----	----	----
ø Exchangeable Magnesium	----	0.2	meq/100g		3.8	----	----	----	----
ø Exchangeable Potassium	----	0.2	meq/100g		<0.2	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
ED006: Exchangeable Cations on Alkaline Soils - Continued									
Exchangeable Sodium	----	0.2	meq/100g		0.9	----	----	----	----
Cation Exchange Capacity	----	0.2	meq/100g		10.1	----	----	----	----
Exchangeable Sodium Percent	----	0.2	%		8.6	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		8	5	7	11	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		24	13	17	20	9
Copper	7440-50-8	5	mg/kg		37	25	22	44	13
Lead	7439-92-1	5	mg/kg		26	16	20	22	11
Nickel	7440-02-0	2	mg/kg		12	10	11	13	6
Zinc	7440-66-6	5	mg/kg		57	59	95	65	49
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
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 - (Lindane)	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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/5 0-2	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	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	<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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	150	<100	<100
C29 - C36 Fraction	-----	100	mg/kg	<100	<100	160	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg	<50	<50	310	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ 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	60	<50	<50
>C16 - C34 Fraction	-----	100	mg/kg	<100	<100	220	<100	<100



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_BH01_0.5	DPS_BH02_0.1	DPS_BH03_0.1	DPS_HA01_0.5	DPS_HA02_0.1
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-002	ES2502103-006	ES2502103-011	ES2502103-017	ES2502103-020
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		76.8	86.3	84.3	75.5	85.3
Toluene-D8	2037-26-5	0.2	%		76.2	89.4	85.4	71.4	88.5
4-Bromofluorobenzene	460-00-4	0.2	%		100.0	108	107	91.8	107

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00	
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	13.8	17.2	9.6	24.0	13.0	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	----	
Asbestos Type	1332-21-4	-	--	-	-	-	-	----	
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	----	
Sample weight (dry)	----	0.01	g	257	308	327	401	----	
Synthetic Mineral Fibre	----	-	--	No	No	No	No	----	
Organic Fibre	----	-	--	No	No	No	No	----	
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	----	
EA200N: Asbestos Quantification (non-NATA)									
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	----	
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	----	
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	----	
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	----	
ø Weight Used for % Calculation	----	0.0001	kg	0.257	0.308	0.327	0.401	----	
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	----	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	7	9	13	7	<5	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	18	20	28	14	12	
Copper	7440-50-8	5	mg/kg	29	28	19	41	14	
Lead	7439-92-1	5	mg/kg	20	26	25	29	11	
Nickel	7440-02-0	2	mg/kg	14	11	9	14	6	
Zinc	7440-66-6	5	mg/kg	64	51	34	80	35	
EG035T: Total Recoverable Mercury by FIMS									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
					Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued									
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	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		----	<0.05	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		----	<0.05	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time				14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>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	%		----	77.0	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	138	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	125	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		97.5	102	101	107	108
2-Chlorophenol-D4	93951-73-6	0.5	%		99.9	101	99.0	99.2	97.9
2,4,6-Tribromophenol	118-79-6	0.5	%		69.8	67.4	71.0	67.5	81.3
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		105	107	108	107	107
Anthracene-d10	1719-06-8	0.5	%		101	101	103	103	102



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	DPS_HA03_0.1	DPS_HA04_0.5	DPS_HA05_0.5	DPS_HA06_0.5	QC101
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	15-Jan-2025 00:00	14-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-024	ES2502103-029	ES2502103-033	ES2502103-037	ES2502103-040
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		104	104	106	106	106
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		78.0	70.2	80.5	76.0	71.3
Toluene-D8	2037-26-5	0.2	%		82.2	71.1	87.1	77.0	74.3
4-Bromofluorobenzene	460-00-4	0.2	%		99.4	96.3	111	100	88.6



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)									
pH Value	----	0.1	pH Unit		----	----	----	6.5	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		15.9	13.1	7.7	8.7	22.1
EA150: Soil Classification based on Particle Size									
Clay (<2 µm)	----	1	%		----	----	----	39	----
EA152: Soil Particle Density									
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3		----	----	----	2.46	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Sample weight (dry)	----	0.01	g		139	225	200	497	295
Synthetic Mineral Fibre	----	-	--		No	No	No	No	No
Organic Fibre	----	-	--		No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--		B.SCHRADER	J. WILLIAMS	B.SCHRADER	J. WILLIAMS	J. WILLIAMS
EA200N: Asbestos Quantification (non-NATA)									
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)		<0.001	<0.001	<0.001	<0.001	<0.001
ø Asbestos Containing Material	1332-21-4	0.1	g		<0.1	<0.1	<0.1	<0.1	<0.1
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)		<0.01	<0.01	<0.01	<0.01	<0.01
ø Weight Used for % Calculation	----	0.0001	kg		0.139	0.225	0.200	0.497	0.295
ø Fibrous Asbestos >7mm	----	0.0004	g		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ED007: Exchangeable Cations									
Exchangeable Calcium	----	0.1	meq/100g		----	----	----	8.4	----
Exchangeable Magnesium	----	0.1	meq/100g		----	----	----	7.0	----
Exchangeable Potassium	----	0.1	meq/100g		----	----	----	0.6	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
ED007: Exchangeable Cations - Continued									
Exchangeable Sodium	----	0.1	meq/100g		----	----	----	0.5	----
Cation Exchange Capacity	----	0.1	meq/100g		----	----	----	16.5	----
Exchangeable Sodium Percent	----	0.1	%		----	----	----	3.1	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		10	<5	6	11	7
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		16	8	13	22	13
Copper	7440-50-8	5	mg/kg		21	17	17	27	23
Lead	7439-92-1	5	mg/kg		16	45	46	25	16
Nickel	7440-02-0	2	mg/kg		5	6	7	12	5
Zinc	7440-66-6	5	mg/kg		26	80	62	69	30
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	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	<0.05	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time				15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	----
[^] Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	----
[^] Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	----
[^] Sum of DDD + DDE + DDT	72-54-8/72-55-9/5-0-2	0.05	mg/kg	<0.05	----	<0.05	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.5	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.5	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.5	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.5	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.5	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time				15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
Pentachlorophenol	87-86-5	2	mg/kg	<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
Benzo(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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	100	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ 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	100	<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	%		72.1	----	88.7	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		139	----	137	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		116	----	103	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		116	109	98.3	88.0	106



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				GPS_BH01_0.5	GPS_BH02_0.1	GPS_BH03_0.1	GPS_BH04_0.5	GPS_HA01_0.5
Sampling date / time				15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-042	ES2502103-046	ES2502103-051	ES2502103-057	ES2502103-062
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
2-Chlorophenol-D4	93951-73-6	0.5	%	107	103	102	90.4	106
2,4,6-Tribromophenol	118-79-6	0.5	%	80.9	75.8	74.2	81.2	83.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	108	107	105	96.1	108
Anthracene-d10	1719-06-8	0.5	%	104	100	99.8	94.1	105
4-Terphenyl-d14	1718-51-0	0.5	%	107	104	103	97.7	106
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	81.8	77.0	92.6	84.6	69.5
Toluene-D8	2037-26-5	0.2	%	87.3	84.4	99.0	90.3	73.4
4-Bromofluorobenzene	460-00-4	0.2	%	111	96.0	113	106	94.2

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	29.3	19.5	15.9	12.8	9.5	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No	
Asbestos Type	1332-21-4	-	--	-	-	-	-	-	
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No	
Sample weight (dry)	----	0.01	g	188	197	298	324	176	
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No	
Organic Fibre	----	-	--	No	No	No	No	No	
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	
EA200N: Asbestos Quantification (non-NATA)									
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001	
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	<0.1	<0.1	
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	<0.01	<0.01	
ø Weight Used for % Calculation	----	0.0001	kg	0.188	0.197	0.298	0.324	0.176	
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	<5	7	6	10	6	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1	
Chromium	7440-47-3	2	mg/kg	7	12	10	25	13	
Copper	7440-50-8	5	mg/kg	16	20	16	17	24	
Lead	7439-92-1	5	mg/kg	43	46	37	26	26	
Nickel	7440-02-0	2	mg/kg	5	6	6	8	14	
Zinc	7440-66-6	5	mg/kg	50	65	53	36	81	
EG035T: Total Recoverable Mercury by FIMS									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued									
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	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	<0.05	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	<0.05	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	<0.05	----	----
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	<0.2	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time				15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time				15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>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	100	<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	%		64.8	----	70.5	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		131	----	110	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		82.7	----	70.7	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		111	117	110	115	104
2-Chlorophenol-D4	93951-73-6	0.5	%		99.5	107	96.8	102	100
2,4,6-Tribromophenol	118-79-6	0.5	%		72.8	70.9	78.5	70.2	78.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		106	106	105	105	106
Anthracene-d10	1719-06-8	0.5	%		101	101	99.3	99.9	102



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	GPS_HA02_0.1	GPS_HA03_0.1	GPS_HA04_0.1	GPS_HA05_0.1	GPS_HA06_0.1
Sampling date / time					15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00	15-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2502103-064	ES2502103-067	ES2502103-071	ES2502103-074	ES2502103-077
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		102	105	104	104	104
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		81.9	73.1	85.5	83.4	83.8
Toluene-D8	2037-26-5	0.2	%		82.2	79.3	95.8	79.3	84.9
4-Bromofluorobenzene	460-00-4	0.2	%		103	95.4	113	93.9	98.9



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time					14-Jan-2025 00:00	14-Jan-2025 00:00	14-Jan-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2502103-081	ES2502103-082	ES2502103-083	-----	-----
				Result	Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
[^] C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
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	2.3	2.3	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	3.4	3.3	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	3.8	3.7	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	1.7	1.6	----	----
[^] Sum of BTEX	----	0.2	mg/kg		<0.2	11.2	10.9	----	----
[^] Total Xylenes	----	0.5	mg/kg		<0.5	5.5	5.3	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		91.6	85.2	85.4	----	----
Toluene-D8	2037-26-5	0.2	%		98.9	93.0	97.2	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		122	111	115	----	----



Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)				Sample ID	AsbestosFragments	----	----	----	----
Sampling date / time				15-Jan-2025 00:00	----	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2502103-073	-----	-----	-----	-----	-----
Result				----	----	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples									
Asbestos Detected	1332-21-4	0.1	g/kg	Yes	----	----	----	----	----
Asbestos Type	1332-21-4	-	--	Ch + Am	----	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	N/A	----	----	----	----	----
Sample weight (dry)	----	0.01	g	2.03	----	----	----	----	----
Synthetic Mineral Fibre	----	-	-	No	----	----	----	----	----
Organic Fibre	----	-	-	Yes	----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	----	----	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				RINSATE_1	----	----	----	----
Sampling date / time				15-Jan-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2502103-080	-----	-----	-----	-----
				Result	----	----	----	----
EG020T: Total 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	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EP071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	----
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	----



Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	DPS_BH01_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_BH02_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_BH03_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA01_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA02_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA03_0.1 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA04_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA05_0.5 - 14-Jan-2025 00:00	A soil sample.
EA200: Description	DPS_HA06_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH01_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH02_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH03_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_BH04_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA01_0.5 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA02_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA03_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA04_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA05_0.1 - 15-Jan-2025 00:00	A soil sample.
EA200: Description	GPS_HA06_0.1 - 15-Jan-2025 00:00	A soil sample.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	AsbestosFragments - 15-Jan-2025 00:00	A collection of asbestos cement sheeting debris.



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

(SOLID) EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples



QUALITY CONTROL REPORT

Work Order : **ES2502103**

Page : 1 of 25

Amendment : **2**

Client : **WSP Australia Pty Ltd**

Contact : **MELINDA COLLIER**

Address : **LEVEL 27 680 GEORGE STREET
SYDNEY 2000**

Telephone : **+61 02 9272 5183**

Project : **PS206292 School of Infrastructure NSW**

Order number : **PS206292**

C-O-C number : **----**

Sampler : **GRACE BENDALL-PEASE, MACKENZIE WEEKS**

Site : **----**

Quote number : **EN/000**

No. of samples received : **84**

No. of samples analysed : **25**

Laboratory : **Environmental Division Sydney**

Contact : **Sepan Mahamad**

Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**

Telephone : **+61 2 8784 8555**

Date Samples Received : **15-Jan-2025**

Date Analysis Commenced : **28-Jan-2025**

Issue Date : **18-Feb-2025**



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
Alana Smylie	Team Leader - Asbestos	Newcastle - Inorganics, Mayfield West, NSW
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, 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
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6338253)									
ES2502148-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	9	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	13	21	46.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	84	73	14.9	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	122	118	3.8	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	1180	1120	5.1	0% - 20%
EN2501187-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	21	21	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	11	13	16.9	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	18	7.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	145	160	9.7	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339051)									
ES2501620-001	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	261	316	18.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	604	635	5.1	0% - 20%
ES2501620-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	21	11.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	37	24	40.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	9	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 (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339051) - continued									
ES2501620-001	Anonymous	EG005T: Copper	7440-50-8	5	mg/kg	307	286	6.9	0% - 20%
ES2502253-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	33	37	10.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	48	50	4.7	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	5	31.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	19	19	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	11	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	109	120	9.5	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339635)									
ES2502004-001	Anonymous	EG005T: Cadmium	7440-43-9	1 (2)*	mg/kg	50	52	4.7	0% - 20%
		EG005T: Chromium	7440-47-3	2	mg/kg	10	11	9.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	20	21	8.4	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	387	408	5.2	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	10600	11200	5.1	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	25900	27200	5.0	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	30300	31800	4.8	0% - 20%
ES2502103-067	GPS_HA03_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	15	25.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	8	16.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	8	22.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	20	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	46	43	6.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	65	63	3.0	0% - 50%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6339764)									
ES2501067-011	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	12	21.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	8	33.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	8	13.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	18	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	13	31.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	43	34	23.6	No Limit
ES2502036-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	4	38.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	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	16	18	11.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	58	71	19.3	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: 6339764) - continued									
ES2502036-009	Anonymous	EG005T: Zinc	7440-66-6	5	mg/kg	37	44	16.5	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6363394)									
ES2502103-057	GPS_BH04_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	24	8.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	12	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	12	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	27	27	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	25	29	14.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	69	64	7.0	0% - 50%
EA002: pH 1:5 (Soils) (QC Lot: 6338246)									
EN2501153-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.2	9.2	0.0	0% - 20%
ES2501827-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.2	9.3	1.2	0% - 20%
EA002: pH 1:5 (Soils) (QC Lot: 6363391)									
ES2502103-057	GPS_BH04_0.5	EA002: pH Value	----	0.1	pH Unit	6.5	6.6	2.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336795)									
ES2502062-037	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	32.0	31.4	2.1	0% - 20%
ES2502062-045	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	36.6	35.8	2.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336796)									
ES2502103-029	DPS_HA04_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	17.2	17.0	0.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6336926)									
ES2501620-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	7.8	10.4	29.1	0% - 50%
ES2501825-019	Anonymous	EA055: Moisture Content	----	0.1	%	31.1	29.8	4.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6338257)									
ES2502103-002	DPS_BH01_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	19.0	16.5	14.2	0% - 50%
ES2502148-006	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	20.8	21.0	0.6	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6338757)									
ES2501067-011	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	12.1	12.9	6.6	0% - 50%
ES2502036-011	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	49.3	54.7	10.3	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6339637)									
ES2501827-005	Anonymous	EA055: Moisture Content	----	0.1	%	26.2	25.2	3.7	0% - 20%
ES2502081-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	6.5	6.7	3.3	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6363401)									
ES2502103-057	GPS_BH04_0.5	EA055: Moisture Content	----	0.1 (1.0)*	%	8.7	8.6	1.9	No Limit
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 6343253)									
ES2501611-002	Anonymous	ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Calcium	----	0.2	meq/100g	2.0	1.8	7.6	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 (%)
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 6343253) - continued									
ES2501611-002	Anonymous	ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	2.0	1.8	7.6	No Limit
ED007: Exchangeable Cations (QC Lot: 6366702)									
ES2502103-057	GPS_BH04_0.5	ED007: Exchangeable Sodium Percent	----	0.1	%	3.1	3.1	0.0	0% - 20%
		ED007: Exchangeable Calcium	----	0.1	meq/100g	8.4	8.5	0.0	0% - 20%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	7.0	7.0	0.0	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.6	0.6	0.0	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	0.5	0.5	0.0	No Limit
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	16.5	16.6	0.0	0% - 20%
ES2503179-008	Anonymous	ED007: Exchangeable Sodium Percent	----	0.1	%	3.4	3.4	0.0	0% - 20%
		ED007: Exchangeable Calcium	----	0.1	meq/100g	7.7	7.8	0.0	0% - 20%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	4.1	4.1	0.0	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.4	0.4	0.0	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	0.4	0.4	0.0	No Limit
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	12.6	12.7	0.0	0% - 20%
		EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6338252)							
ES2502148-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EN2501187-001	Anonymous	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: 6339052)									
ES2501620-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	0.4	0.0	No Limit
ES2502253-001	Anonymous	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: 6339636)									
ES2502004-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	2.2	2.1	0.0	0% - 20%
ES2502103-067	GPS_HA03_0.1	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: 6339765)									
ES2501067-011	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2502036-009	Anonymous	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: 6363395)									
ES2502103-057	GPS_BH04_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6336801)									
ES2502103-002	DPS_BH01_0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6336802)									
ES2502103-002	DPS_BH01_0.5	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: 6336802) - continued									
ES2502103-002	DPS_BH01_0.5	EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6336802)									
ES2502103-002	DPS_BH01_0.5	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: 6336802) - continued									
ES2502103-002	DPS_BH01_0.5	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6336799)									
ES2502103-042	GPS_BH01_0.5	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
ES2502103-002	DPS_BH01_0.5	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: 6358736)									
ES2503272-001	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



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: 6358736) - continued											
ES2503272-001	Anonymous	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		
ES2502763-001	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: 6336799)									
ES2502103-042	GPS_BH01_0.5	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	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		
		ES2502103-002	DPS_BH01_0.5	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		



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: 6336799) - continued									
ES2502103-002	DPS_BH01_0.5	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6358736)									
ES2503272-001	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	26.8	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.5	0.7	38.8	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	0.5	mg/kg	<0.5	0.5	0.0	No Limit
			205-82-3						
		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	1.8	113	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	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: 6358736) - continued									
ES2502763-001	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		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
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336651)									
ES2502039-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2501836-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6336800)									
ES2502103-042	GPS_BH01_0.5	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
ES2502103-002	DPS_BH01_0.5	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: 6358737)									
ES2502763-001	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



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: 6360848)									
ES2503208-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2503208-015	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6336639)									
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	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: 6336651)									
ES2502039-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2501836-002	Anonymous	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: 6336800)									
ES2502103-042	GPS_BH01_0.5	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
ES2502103-002	DPS_BH01_0.5	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: 6358737)									
ES2502763-001	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: 6360848)									
ES2503208-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2503208-015	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6336639)									
ES2502103-002	DPS_BH01_0.5	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2502103-042	GPS_BH01_0.5	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		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



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: 6336651)									
ES2502039-001	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2501836-002	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
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: 6360848)									
ES2503208-002	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2503208-015	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
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	
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: 6344562)									
ES2502357-001	Anonymous	EG020A-T: Copper	7440-50-8	0.001	mg/L	0.005	0.004	0.0	No Limit
EN2501560-001	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

Page : 13 of 25
 Work Order : ES2502103 Amendment 2
 Client : WSP Australia Pty Ltd
 Project : PS206292 School of Infrastructure NSW



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: 6344562) - continued									
EN2501560-001	Anonymous	EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.013	0.012	0.0	No Limit
ES2502357-001	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	0.012	0.012	0.0	0% - 50%
		EG020A-T: Chromium	7440-47-3	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	0.009	0.009	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6344569)									
EN2501560-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	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**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6338253)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	95.3	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	85.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	108	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	102	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	93.6	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	97.0	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	88.7	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339051)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	107	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	106	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	101	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	97.1	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339635)								
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	87.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	99.3	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	110	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	89.3	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	124	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	92.8	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	95.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	106	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.1	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	93.8	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	93.2	80.0	120

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764) - continued								
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	90.0	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6363394)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	89.3	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	75.5	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	101	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.4	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	92.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	88.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	87.5	66.0	133
EA002: pH 1:5 (Soils) (QCLot: 6338246)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	100	98.8	101
EA002: pH 1:5 (Soils) (QCLot: 6363391)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	101	98.8	101
				----	7 pH Unit	100	98.8	101
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 6343253)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	2.5 meq/100g	106	80.0	110
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	4.17 meq/100g	103	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	106	80.0	110
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED007: Exchangeable Cations (QCLot: 6366702)								
ED007: Exchangeable Calcium	----	0.1	meq/100g	<0.1	1 meq/100g	99.2	75.8	120
ED007: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	103	74.9	115
ED007: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	104	80.0	120
ED007: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	108	80.0	120
ED007: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----
ED007: Exchangeable Sodium Percent	----	0.1	%	<0.1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6338252)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.1	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339052)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.7	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636)								



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636) - continued								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	95.8	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339765)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.1	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6363395)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	75.9	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6336801)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	87.6	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6336802)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.7	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	77.3	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.6	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.3	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	66.0	116
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	69.0	115
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	62.0	124
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.1	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	79.9	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	75.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	67.0	119



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802) - continued								
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	81.3	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	74.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	54.1	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 6336799)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	103	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	85.4	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	105	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	112	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	67.8	54.0	114
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	105	68.0	126
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	100	66.0	120
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	108	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	92.9	70.0	116
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	99.1	54.0	114
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	88.0	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	38.0	10.0	80.0
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	88.8	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	94.5	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	89.5	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	89.7	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	89.9	54.0	114



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736) - continued								
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	101	68.0	126
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.8	66.0	120
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	91.2	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	88.1	70.0	116
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	86.2	54.0	114
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	88.1	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	41.8	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6336799)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	110	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	108	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	109	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	111	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	83.5	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	110	69.0	123
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	0.5	mg/kg	<0.5	6 mg/kg	107	68.0	116
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	92.3	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.5	70.0	126
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	104	61.0	121
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	97.7	62.0	118
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	92.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	96.7	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	97.2	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	96.4	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.4	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	99.9	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.0	74.0	128



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736) - continued								
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.1	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	98.0	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	94.2	68.0	116
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	101	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	90.9	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	92.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	90.2	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	92.0	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336639)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.4	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336651)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	80.4	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336800)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	103	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	93.0	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6358737)								
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	108	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	111	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6360848)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	77.9	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336639)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	88.4	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336651)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	82.4	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336800)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.6	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	85.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	108	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	109	74.0	138



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: <i>Compound</i>	CAS Number	LOR	Unit	Result				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737) - continued								
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	115	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6360848)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	72.6	72.4	133
EP080: BTEXN (QCLot: 6336639)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	87.6	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	93.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.1	77.4	121
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	101	78.2	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.7	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	78.8	122
EP080: BTEXN (QCLot: 6336651)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.8	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	101	77.4	121
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	103	78.2	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	100	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.0	78.8	122
EP080: BTEXN (QCLot: 6360848)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	80.6	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	85.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.7	77.4	121
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	88.9	78.2	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	88.6	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	81.6	78.8	122

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG020T: Total Metals by ICP-MS (QCLot: 6344562)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	94.7	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	93.4	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.3	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	92.4	83.0	118



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG020T: Total Metals by ICP-MS (QCLot: 6344562) - continued								
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	92.1	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	92.3	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.5	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6344569)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	88.9	77.0	111
EP071: Total Petroleum Hydrocarbons (QCLot: 6336860)								
EP071-SV: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	62.1	51.5	96.4
EP071-SV: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	85.9	62.3	107
EP071-SV: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	96.3	57.2	122
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336860)								
EP071-SV: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	69.6	53.3	93.7
EP071-SV: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	65.0	54.9	115
EP071-SV: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	55.0	50.0	118

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**

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: 6338253)							
EN2501187-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	93.9	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	94.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.3	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339051)							
ES2501620-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	90.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	130	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	78.9	66.0	133



Sub-Matrix: **SOIL**

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: 6339635)							
ES2502004-001	Anonymous	EG005T: Arsenic	7440-38-2	500 mg/kg	98.2	70.0	130
		EG005T: Cadmium	7440-43-9	500 mg/kg	96.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	94.1	68.0	132
		EG005T: Copper	7440-50-8	2500 mg/kg	# Not Determined	70.0	130
		EG005T: Lead	7439-92-1	2500 mg/kg	# Not Determined	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	92.4	70.0	130
		EG005T: Zinc	7440-66-6	2500 mg/kg	# Not Determined	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6339764)							
ES2501067-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	94.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.3	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	102	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.3	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	93.9	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.5	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6363394)							
ES2502103-057	GPS_BH04_0.5	EG005T: Arsenic	7440-38-2	50 mg/kg	87.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	87.0	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.0	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	82.9	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6338252)							
EN2501187-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	94.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339052)							
ES2501620-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	96.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339636)							
ES2502004-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6339765)							
ES2501067-011	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	98.8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6363395)							
ES2502103-057	GPS_BH04_0.5	EG035T: Mercury	7439-97-6	5 mg/kg	85.5	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
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6336801)							
ES2502103-002	DPS_BH01_0.5	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	105	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6336802)							
ES2502103-002	DPS_BH01_0.5	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	98.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	105	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	118	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	109	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	98.1	70.0	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	71.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6336802)							
ES2502103-002	DPS_BH01_0.5	EP068: Diazinon	333-41-5	0.5 mg/kg	125	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	125	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	95.7	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	110	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	105	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6336799)							
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Phenol	108-95-2	10 mg/kg	108	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	83.7	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	98.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	95.0	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	97.6	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6358736)							
ES2502763-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	93.9	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	102	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	101	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	95.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	52.0	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6336799)							
ES2502103-002	DPS_BH01_0.5	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	100	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	120	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6358736)							
ES2502763-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	103	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	87.3	60.4	142



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: 6336800)							
ES2502103-002	DPS_BH01_0.5	EP071: C10 - C14 Fraction	----	480 mg/kg	132	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	126	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	125	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6358737)							
ES2502763-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	136	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	117	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	113	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	77.3	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	85.8	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6336800)							
ES2502103-002	DPS_BH01_0.5	EP071: >C10 - C16 Fraction	----	860 mg/kg	116	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	126	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	128	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6358737)							
ES2502763-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	117	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	114	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	78.5	61.1	142
EP080: BTEXN (QCLot: 6336639)							
ES2502103-002	DPS_BH01_0.5	EP080: Benzene	71-43-2	2.5 mg/kg	101	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	105	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	107	67.4	123
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	119	66.4	121
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	115	70.7	121
ES2502039-001	Anonymous	EP080: Naphthalene	91-20-3	2.5 mg/kg	104	61.1	115
EP080: BTEXN (QCLot: 6336651)							
ES2502039-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	89.6	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	96.0	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	99.6	67.4	123



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: 6336651) - continued							
ES2502039-001	Anonymous	EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	101	66.4	121
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	99.0	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	90.9	61.1	115
EP080: BTEXN (QCLot: 6360848)							
ES2503208-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	87.9	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	88.3	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.2	67.4	123
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	106	66.4	121
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	89.3	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.0	61.1	115
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: 6344562)							
ES2502103-080	RINSATE_1	EG020A-T: Arsenic	7440-38-2	1 mg/L	91.2	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	91.2	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	89.9	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	88.5	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	91.1	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	90.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6344569)							
ES2502103-080	RINSATE_1	EG035T: Mercury	7439-97-6	0.01 mg/L	89.2	70.0	130



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2502103

Page : 1 of 17

Amendment : 2

Client : WSP Australia Pty Ltd

Contact : MELINDA COLLIER

Project : PS206292 School of Infrastructure NSW

Site : ----

Sampler : GRACE BENDALL-PEASE, MACKENZIE WEEKS

Order number : PS206292

Laboratory : Environmental Division Sydney

Telephone : +61 2 8784 8555

Date Samples Received : 15-Jan-2025

Issue Date : 18-Feb-2025

No. of samples received : 84

No. of samples analysed : 25

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.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **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.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	Copper	7440-50-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	Lead	7439-92-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	ES2502004--001	Anonymous	Zinc	7440-66-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Matrix: SOIL

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA002: pH 1:5 (Soils)						
Soil Glass Jar - Unpreserved DPS_BH01_0.5	29-Jan-2025	21-Jan-2025	8	----	----	----
Soil Glass Jar - Unpreserved GPS_BH04_0.5	10-Feb-2025	22-Jan-2025	19	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved GPS_BH04_0.5	----	----	----	10-Feb-2025	29-Jan-2025	12
EP066: Polychlorinated Biphenyls (PCB)						
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP068A: Organochlorine Pesticides (OC)						
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP068B: Organophosphorus Pesticides (OP)						



Matrix: **SOIL**

Method	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP068B: Organophosphorus Pesticides (OP) - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_HA04_0.5 DPS_BH03_0.1,	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_HA02_0.1, GPS_HA04_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP075(SIM)A: Phenolic Compounds						
Soil Glass Jar - Unpreserved DPS_HA02_0.1	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH01_0.5, GPS_BH03_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA05_0.5,	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	----	----	----
Soil Glass Jar - Unpreserved DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
Soil Glass Jar - Unpreserved GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Soil Glass Jar - Unpreserved Trip Blank	----	----	----	29-Jan-2025	28-Jan-2025	1
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5,	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	07-Feb-2025	29-Jan-2025	9
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	----	----	----

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080/071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved GPS_BH01_0.5	31-Jan-2025	29-Jan-2025	2	----	----	----
Soil Glass Jar - Unpreserved DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved Trip Blank	----	----	----	29-Jan-2025	28-Jan-2025	1
Soil Glass Jar - Unpreserved DPS_BH01_0.5, DPS_BH02_0.1, DPS_BH03_0.1, DPS_HA01_0.5, DPS_HA02_0.1, DPS_HA03_0.1, DPS_HA04_0.5, DPS_HA05_0.5, QC101	31-Jan-2025	28-Jan-2025	3	----	----	----
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	07-Feb-2025	29-Jan-2025	9
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	----	----	----
Soil Glass Jar - Unpreserved GPS_BH01_0.5	31-Jan-2025	29-Jan-2025	2	----	----	----
Soil Glass Jar - Unpreserved DPS_HA06_0.5, GPS_BH02_0.1, GPS_BH03_0.1, GPS_HA01_0.5, GPS_HA02_0.1, GPS_HA03_0.1, GPS_HA04_0.1, GPS_HA05_0.1, GPS_HA06_0.1	31-Jan-2025	29-Jan-2025	2	----	----	----
EP080: BTEXN						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	----	----	----	29-Jan-2025	28-Jan-2025	1
Soil Glass Jar - Unpreserved GPS_BH04_0.5	07-Feb-2025	29-Jan-2025	9	07-Feb-2025	29-Jan-2025	9

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP071: Total Petroleum Hydrocarbons						



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
EP071: Total Petroleum Hydrocarbons - Analysis Holding Time Compliance						
Amber Glass Bottle - Unpreserved RINSATE_1	28-Jan-2025	22-Jan-2025	6	----	----	----
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Amber Glass Bottle - Unpreserved RINSATE_1	28-Jan-2025	22-Jan-2025	6	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
TRH - Semivolatile Fractions Only	EP071-SV	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
TRH - Semivolatile Fractions Only	EP071-SV	0	1	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: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002: pH 1:5 (Soils)							
Soil Glass Jar - Unpreserved (EA002) DPS_BH01_0.5	14-Jan-2025	29-Jan-2025	21-Jan-2025	✖	29-Jan-2025	29-Jan-2025	✔
Soil Glass Jar - Unpreserved (EA002) GPS_BH04_0.5	15-Jan-2025	10-Feb-2025	22-Jan-2025	✖	10-Feb-2025	10-Feb-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5	14-Jan-2025	----	----	----	28-Jan-2025	28-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) GPS_BH01_0.5	15-Jan-2025	----	----	----	28-Jan-2025	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) DPS_HA06_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1 GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1	15-Jan-2025	----	----	----	29-Jan-2025	29-Jan-2025	✓
Soil Glass Jar - Unpreserved (EA055) GPS_BH04_0.5	15-Jan-2025	----	----	----	10-Feb-2025	29-Jan-2025	✗
EA150: Soil Classification based on Particle Size							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) DPS_BH01_0.5	14-Jan-2025	----	----	----	05-Feb-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) GPS_BH04_0.5	15-Jan-2025	----	----	----	13-Feb-2025	14-Jul-2025	✓
EA152: Soil Particle Density							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) DPS_BH01_0.5	14-Jan-2025	----	----	----	05-Feb-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) GPS_BH04_0.5	15-Jan-2025	----	----	----	13-Feb-2025	14-Jul-2025	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_HA02_0.1	14-Jan-2025	----	----	----	18-Feb-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA03_0.1, DPS_HA05_0.5 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA04_0.5	14-Jan-2025	----	----	----	29-Jan-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) GPS_BH04_0.5	15-Jan-2025	----	----	----	10-Feb-2025	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) GPS_BH01_0.5, GPS_BH03_0.1	15-Jan-2025	----	----	----	18-Feb-2025	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) DPS_HA06_0.5, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1 GPS_BH02_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1	15-Jan-2025	----	----	----	29-Jan-2025	14-Jul-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) DPS_HA02_0.1	14-Jan-2025	----	----	----	18-Feb-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA03_0.1, DPS_HA05_0.5 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA04_0.5,	14-Jan-2025	----	----	----	29-Jan-2025	13-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) GPS_BH04_0.5	15-Jan-2025	----	----	----	10-Feb-2025	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) GPS_BH01_0.5, GPS_BH03_0.1	15-Jan-2025	----	----	----	18-Feb-2025	14-Jul-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N) DPS_HA06_0.5, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1, GPS_BH02_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1	15-Jan-2025	----	----	----	29-Jan-2025	14-Jul-2025	✓
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006) DPS_BH01_0.5	14-Jan-2025	30-Jan-2025	11-Feb-2025	✓	30-Jan-2025	11-Feb-2025	✓
ED007: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED007) GPS_BH04_0.5	15-Jan-2025	11-Feb-2025	12-Feb-2025	✓	11-Feb-2025	12-Feb-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) DPS_BH01_0.5	14-Jan-2025	28-Jan-2025	13-Jul-2025	✓	29-Jan-2025	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T) DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	14-Jan-2025	29-Jan-2025	13-Jul-2025	✓	29-Jan-2025	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T) DPS_HA05_0.5, QC101	14-Jan-2025	29-Jan-2025	13-Jul-2025	✓	30-Jan-2025	13-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T) GPS_BH04_0.5	15-Jan-2025	10-Feb-2025	14-Jul-2025	✓	10-Feb-2025	14-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T) DPS_HA06_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1 GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1,	15-Jan-2025	29-Jan-2025	14-Jul-2025	✓	29-Jan-2025	14-Jul-2025	✓
Soil Glass Jar - Unpreserved (EG005T) GPS_BH01_0.5	15-Jan-2025	29-Jan-2025	14-Jul-2025	✓	30-Jan-2025	14-Jul-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) DPS_BH01_0.5	14-Jan-2025	28-Jan-2025	11-Feb-2025	✔	29-Jan-2025	11-Feb-2025	✔
Soil Glass Jar - Unpreserved (EG035T) DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5	14-Jan-2025	29-Jan-2025	11-Feb-2025	✔	29-Jan-2025	11-Feb-2025	✔
Soil Glass Jar - Unpreserved (EG035T) DPS_HA05_0.5, QC101	14-Jan-2025	29-Jan-2025	11-Feb-2025	✔	30-Jan-2025	11-Feb-2025	✔
Soil Glass Jar - Unpreserved (EG035T) GPS_BH04_0.5	15-Jan-2025	10-Feb-2025	12-Feb-2025	✔	11-Feb-2025	12-Feb-2025	✔
Soil Glass Jar - Unpreserved (EG035T) DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1, GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1	15-Jan-2025	29-Jan-2025	12-Feb-2025	✔	30-Jan-2025	12-Feb-2025	✔
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) DPS_BH01_0.5, DPS_HA02_0.1, DPS_BH03_0.1, DPS_HA04_0.5	14-Jan-2025	31-Jan-2025	28-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP066) GPS_BH01_0.5, GPS_HA02_0.1, GPS_BH03_0.1, GPS_HA04_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) DPS_BH01_0.5, DPS_HA02_0.1, DPS_BH03_0.1, DPS_HA04_0.5	14-Jan-2025	31-Jan-2025	28-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP068) GPS_BH01_0.5, GPS_HA02_0.1, GPS_BH03_0.1, GPS_HA04_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) DPS_BH01_0.5, DPS_HA04_0.5, DPS_BH03_0.1	14-Jan-2025	31-Jan-2025	28-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP068) GPS_HA02_0.1, GPS_HA04_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) DPS_HA02_0.1	14-Jan-2025	31-Jan-2025	28-Jan-2025	✖	03-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP075(SIM)) GPS_BH01_0.5, GPS_BH03_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	03-Feb-2025	12-Mar-2025	✔

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Soil Glass Jar - Unpreserved (EP075(SIM)) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101		DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5, QC101	14-Jan-2025	31-Jan-2025	28-Jan-2025	✖	03-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP075(SIM)) GPS_BH04_0.5			15-Jan-2025	07-Feb-2025	29-Jan-2025	✖	10-Feb-2025	19-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP075(SIM)) DPS_HA06_0.5, GPS_BH02_0.1,		GPS_BH01_0.5, GPS_BH03_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	03-Feb-2025	12-Mar-2025	✔
Soil Glass Jar - Unpreserved (EP075(SIM)) GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1,		GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✖	04-Feb-2025	12-Mar-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5	14-Jan-2025	28-Jan-2025	28-Jan-2025	✓	28-Jan-2025	28-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP080) Trip Blank	14-Jan-2025	28-Jan-2025	28-Jan-2025	✓	29-Jan-2025	28-Jan-2025	✗	
Soil Glass Jar - Unpreserved (EP071) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5	14-Jan-2025	31-Jan-2025	28-Jan-2025	✗	04-Feb-2025	12-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP071) GPS_BH04_0.5	15-Jan-2025	07-Feb-2025	29-Jan-2025	✗	10-Feb-2025	19-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	15-Jan-2025	07-Feb-2025	29-Jan-2025	✗	07-Feb-2025	29-Jan-2025	✗	
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA05_0.1 GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA06_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✓	28-Jan-2025	29-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA03_0.1 GPS_HA02_0.1, GPS_HA04_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✓	29-Jan-2025	29-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP071) GPS_BH01_0.5	15-Jan-2025	31-Jan-2025	29-Jan-2025	✗	03-Feb-2025	12-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP071) DPS_HA06_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1 GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✗	04-Feb-2025	12-Mar-2025	✓	



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5	14-Jan-2025	28-Jan-2025	28-Jan-2025	✓	28-Jan-2025	28-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP080) Trip Blank	14-Jan-2025	28-Jan-2025	28-Jan-2025	✓	29-Jan-2025	28-Jan-2025	✗	
Soil Glass Jar - Unpreserved (EP071) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5	14-Jan-2025	31-Jan-2025	28-Jan-2025	✗	04-Feb-2025	12-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP071) GPS_BH04_0.5	15-Jan-2025	07-Feb-2025	29-Jan-2025	✗	10-Feb-2025	19-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	15-Jan-2025	07-Feb-2025	29-Jan-2025	✗	07-Feb-2025	29-Jan-2025	✗	
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA05_0.1 GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA06_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✓	28-Jan-2025	29-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA03_0.1 GPS_HA02_0.1, GPS_HA04_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✓	29-Jan-2025	29-Jan-2025	✓	
Soil Glass Jar - Unpreserved (EP071) GPS_BH01_0.5	15-Jan-2025	31-Jan-2025	29-Jan-2025	✗	03-Feb-2025	12-Mar-2025	✓	
Soil Glass Jar - Unpreserved (EP071) DPS_HA06_0.5, GPS_BH03_0.1, GPS_HA02_0.1, GPS_HA04_0.1, GPS_HA06_0.1 GPS_BH02_0.1, GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA05_0.1	15-Jan-2025	31-Jan-2025	29-Jan-2025	✗	04-Feb-2025	12-Mar-2025	✓	



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) DPS_BH01_0.5, DPS_BH03_0.1, DPS_HA02_0.1, DPS_HA04_0.5, QC101 DPS_BH02_0.1, DPS_HA01_0.5, DPS_HA03_0.1, DPS_HA05_0.5,	14-Jan-2025	28-Jan-2025	28-Jan-2025	✔	28-Jan-2025	28-Jan-2025	✔	
Soil Glass Jar - Unpreserved (EP080) Trip Blank, Trip Spike Control Trip Spike,	14-Jan-2025	28-Jan-2025	28-Jan-2025	✔	29-Jan-2025	28-Jan-2025	✘	
Soil Glass Jar - Unpreserved (EP080) GPS_BH04_0.5	15-Jan-2025	07-Feb-2025	29-Jan-2025	✘	07-Feb-2025	29-Jan-2025	✘	
Soil Glass Jar - Unpreserved (EP080) DPS_HA06_0.5, GPS_BH02_0.1, GPS_HA05_0.1, GPS_BH01_0.5, GPS_BH03_0.1, GPS_HA06_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✔	28-Jan-2025	29-Jan-2025	✔	
Soil Glass Jar - Unpreserved (EP080) GPS_HA01_0.5, GPS_HA03_0.1, GPS_HA02_0.1, GPS_HA04_0.1	15-Jan-2025	28-Jan-2025	29-Jan-2025	✔	29-Jan-2025	29-Jan-2025	✔	

Matrix: **SOLID**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) AsbestosFragments	15-Jan-2025	----	----	----	29-Jan-2025	14-Jul-2025	✔

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Natural (EG020A-T) RINSATE_1	15-Jan-2025	31-Jan-2025	14-Jul-2025	✔	31-Jan-2025	14-Jul-2025	✔
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Natural (EG035T) RINSATE_1	15-Jan-2025	----	----	----	03-Feb-2025	12-Feb-2025	✔
EP071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071-SV) RINSATE_1	15-Jan-2025	28-Jan-2025	22-Jan-2025	✖	31-Jan-2025	09-Mar-2025	✔
EP071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071-SV) RINSATE_1	15-Jan-2025	28-Jan-2025	22-Jan-2025	✖	31-Jan-2025	09-Mar-2025	✔



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)							
Exchangeable Cations	ED007	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	12	87	13.79	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	34	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	3	26	11.54	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	9	69	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	10	73	13.70	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	29	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	6	51	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Exchangeable Cations	ED007	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	4	26	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	5	69	7.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	6	73	8.22	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Exchangeable Cations	ED007	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	5	69	7.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	5	73	6.85	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	8	12.50	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	
Matrix Spikes (MS) - Continued							
Total Mercury by FIMS	EG035T	5	69	7.25	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	5	73	6.85	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	29	6.90	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	51	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard

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)							
Total Mercury by FIMS	EG035T	1	6	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	3	20	15.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fractions Only	EP071-SV	0	1	0.00	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 (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).
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).
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1: Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
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.
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. 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 (SnCl ₂) (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 SnCl ₂ 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).



Analytical Methods	Method	Matrix	Method Descriptions
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.
Asbestos Identification in Bulk Solids	EA200	SOLID	In house: Referenced to AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
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 (SnCl ₂)(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 SnCl ₂ 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 - Semivolatile Fractions Only	EP071-SV	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 NEPM Schedule B(3).

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 NH ₄ Cl 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.
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, Na ₂ SO ₄ 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.
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.



CHAIN OF CUSTODY

ALS Laboratory
please tick →

LABELLARD 211 Boma Road, Pootah SA 5096
Ph: 08 8759 8291 E: labellard@als.com.au

LIBERTY 32 Strand Street, Stirling QLD 4053
Ph: 07 5243 7222 E: samples@als.com.au

LMACKAY 77 Harbour Road, Mackay QLD 4240
Ph: 07 4944 9177 E: mackay@als.com.au

NEWCASTLE 5555 Murrumbidgee Highway, Warrawee NSW 2258
Ph: 02 4021 1125 E: newcastle@als.com.au

PERTH 10 Red Way, Mandurah WA 6090

PERTH 10 Red Way, Mandurah WA 6090

SYDNEY 277-280 Woodpark Road, South Hill NSW 2154
Ph: 02 8784 8555 E: samples@sydney.als.com.au

TOWNSVILLE 14-15 Deane Court, Birkdale QLD 4219
Ph: 07 4798 0900 E: towntown@townsville.als.com.au

WOLLONGONG 99 Kenny Street, Wollongong NSW 2500
Ph: 02 4223 1125 E: perth@als.com.au

CLIENT: WSP		TURNAROUND REQUIREMENTS:		☒ Standard TAT (List due date):		FOR LABORATORY USE ONLY (Circle)	
OFFICE: L27 680 George St Sydney 2600		(Standard TAT may be longer for some tests e.g., Ultra Trace Organics)		☐ Non Standard or urgent TAT (List due date):		Custody/Seal Intact? Yes No N/A	
PROJECT: PS206292		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle)		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NUMBER: -				COC: 1 2 3 4 5 6 7 8 9		Random Sample Temperature on Receipt °C	
PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		OF: 1 2 3 4 5 6 7 8 9		Other comment:	
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RELINQUISHED BY: GBP		RECEIVED BY: [Signature]	
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		DATE/TIME: 15/1/2025 5:15 pm		DATE/TIME: 20/1/25 11:20	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com							
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com							
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:							

ALS USE	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).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	pH, CEC, clay content								Please forward to Eurofins	Comments
1	DPS_BH01_0.1	14/01/2025	SOIL			X													
2	DPS_BH01_0.5	14/01/2025	SOIL				X	X	X	X									Subcon / Forward Lab / Split WO
3	DPS_BH01_1.0	14/01/2025	SOIL			X													Lab / Analysis: ALS Newcastle Eurofins
4	DPS_BH01_1.5	14/01/2025	SOIL			X													Organised By / Date:
5	DPS_BH01_2.0	14/01/2025	SOIL			X													Relinquished By / Date:
6	DPS_BH02_0.1	14/01/2025	SOIL				X	X											Connote / Courier: Ashesha / QC FWD
7	DPS_BH02_0.5	14/01/2025	SOIL			X													WO No: ES2502103
8	DPS_BH02_1.0	14/01/2025	SOIL			X													Attached By PO Internal Sheet:
9	DPS_BH02_1.5	14/01/2025	SOIL			X													
10	DPS_BH02_2.0	14/01/2025	SOIL			X													
11	DPS_BH03_0.1	14/01/2025	SOIL				X	X	X										
12	DPS_BH03_0.5	14/01/2025	SOIL			X													
13	DPS_BH03_1.0	14/01/2025	SOIL			X													
TOTAL						0	10	3	3	2	1	0	0	0	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
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

Environmental Division
Sydney
Work Order Reference
ES2502103



Telephone : + 61-2-8784 8555



CHAIN OF CUSTODY

ALS Laboratory
please tick →

24011 NEE 25th Street, Suite 200, Sydney NSW 2000
Ph: 02 9339 8000 E: als@als.com.au

24011 NEE 25th Street, Suite 200, Sydney NSW 2000
Ph: 02 9339 8000 E: als@als.com.au

24011 NEE 25th Street, Suite 200, Sydney NSW 2000
Ph: 02 9339 8000 E: als@als.com.au

CLIENT: WSP		TURNAROUND REQUIREMENTS : ☒ Standard TAT (List due date): (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)		FOR LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A	
OFFICE: L27 680 George St Sydney 2600		ALS QUOTE NO.:		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
PROJECT: PS206292				Random Sample Temperature on Receipt: °C	
ORDER NUMBER: -				Other comment:	
PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767			
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RECEIVED BY:	
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		RECEIVED BY:	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		RELINQUISHED BY: GBP		RECEIVED BY:	
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm		RECEIVED BY:	

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	TRH, BTEX, PAH, 8 Heavy Metals	Asbestos (NEM)	OCP, PCB and phenols									Please forward to Eurofins	HOLD	Comments
14	DPS_BH03_1.5	14/01/2025	SOIL		2	X														
15	DPS_BH03_2.0	14/01/2025	SOIL		2	X														
16	DPS_HA01_0.1	14/01/2025	SOIL		2	X														
17	DPS_HA01_0.5	14/01/2025	SOIL		2		X	X												
18	DPS_HA01_1.0	14/01/2025	SOIL		2	X														
19	DPS_HA01_1.5	14/01/2025	SOIL		2	X														
20	DPS_HA02_0.1	14/01/2025	SOIL		2		X	X	X											
21	DPS_HA02_0.5	14/01/2025	SOIL		2	X														
22	DPS_HA02_1.0	14/01/2025	SOIL		2	X														
23	DPS_HA02_1.5	14/01/2025	SOIL		2	X														
24	DPS_HA03_0.1	14/01/2025	SOIL		2		X	X												
25	DPS_HA03_0.5	14/01/2025	SOIL		2	X														
26	DPS_HA03_1.0	14/01/2025	SOIL		2	X														
TOTAL					0	10	3	3	1	0	0	0	0	0	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 Solids; B = Unpreserved Bag.



CHAIN OF CUSTODY

ALS Laboratory
please tick →

ALS Environmental Pty Ltd
100-110 Stirling Street, Sydney NSW 2000
Ph: 02 9211 7222 Fax: 02 9211 7223
Email: info@als.com.au

ALS Environmental Pty Ltd
100-110 Stirling Street, Sydney NSW 2000
Ph: 02 9211 7222 Fax: 02 9211 7223
Email: info@als.com.au

ALS Environmental Pty Ltd
100-110 Stirling Street, Sydney NSW 2000
Ph: 02 9211 7222 Fax: 02 9211 7223
Email: info@als.com.au

CLIENT: WSP		TURNAROUND REQUIREMENTS : ☒ Standard TAT (List due date):		FOR LABORATORY USE ONLY (Circle)	
OFFICE: L27 680 George St Sydney 2600		(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):		Custody Seal Intact? Yes No N/A	
PROJECT: PS206292		ALS QUOTE NO.:		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NUMBER: -		COC SEQUENCE NUMBER (Circle)		Random Sample Temperature on Receipt: °C	
PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		Other comment:	
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RECEIVED BY:	
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		RECEIVED BY:	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		RELINQUISHED BY: GBP		RECEIVED BY:	
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm		DATE/TIME: 21/1/25 11:30	

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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)												
	LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (B)	OCP, OPP, PCB									
	27	DPS_HA03_1.5	14/01/2025	SOIL		2	X												
	28	DPS_HA04_0.1	14/01/2025	SOIL		2	X												
	29	DPS_HA04_0.5	14/01/2025	SOIL		2		X	X	X									
	30	DPS_HA04_1.0	14/01/2025	SOIL		2	X												
	31	DPS_HA04_1.5	14/01/2025	SOIL		2	X												
	32	DPS_HA05_0.1	14/01/2025	SOIL		2	X												
	33	DPS_HA05_0.5	14/01/2025	SOIL		2		X	X										
	34	DPS_HA05_1.0	14/01/2025	SOIL		2	X												
	35	DPS_HA05_1.5	14/01/2025	SOIL		2	X												
	36	DPS_HA06_0.1	15/01/2025	SOIL		2	X												
	37	DPS_HA06_0.5	15/01/2025	SOIL		2		X	X										
	38	DPS_HA06_1.0	15/01/2025	SOIL		2	X												
	39	DPS_HA06_1.5	15/01/2025	SOIL		2	X												
	TOTAL					0	10	3	3	1	0	0	0	0	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 Bottler; ASS = Plastic Bag for Acid Sulphate Solis; B = Unpreserved Bag



CHAIN OF CUSTODY

ALS Laboratory
please tick →

CLIENT: WSP		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):		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:	
OFFICE: L27 680 George St Sydney 2600		PROJECT: PS206292		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 8 9 OF: 1 2 3 4 5 6 7 8 9	
ORDER NUMBER: -		PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		RECEIVED BY: <i>[Signature]</i> DATE/TIME: 20/1/25 11:30	
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RELINQUISHED BY: GBP		RELINQUISHED BY:	
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		DATE/TIME: 15/1/2025 5:15 pm		RECEIVED BY:	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com				DATE/TIME:	

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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).										
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	TRH, BTEX, PAH, 8 Heavy Metals	Asbestos (NEPM)	OCF, PCB and phenols							Please forward to Eurofins	Comments
40	QC101	14/01/2025	SOIL		1		X	X									
-	QC101A	14/01/2025	SOIL		1											X	
41	GPS_BH01_0.1	15/01/2025	SOIL		2	X											
42	GPS_BH01_0.5	15/01/2025	SOIL		2		X	X	X								
43	GPS_BH01_1.0	15/01/2025	SOIL		2	X											
44	GPS_BH01_1.5	15/01/2025	SOIL		2	X											
45	GPS_BH01_2.0	15/01/2025	SOIL		2	X											
46	GPS_BH02_0.1	15/01/2025	SOIL		2		X	X									
47	GPS_BH02_0.5	15/01/2025	SOIL		2	X											
48	GPS_BH02_1.0	15/01/2025	SOIL		2	X											
49	GPS_BH02_1.5	15/01/2025	SOIL		2	X											
50	GPS_BH02_2.0	15/01/2025	SOIL		2	X											
51	GPS_BH03_0.1	15/01/2025	SOIL		2		X	X	X								
TOTAL					0	8	4	4	2	0	0	0	0	0	0	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 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



CHAIN OF CUSTODY

ALS Laboratory
please tick →

CLIENT: WSP		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):	FOR LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A		
OFFICE: L27 680 George St Sydney 2600		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 8 9 OF: 1 2 3 4 5 6 7 8 9			Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT: PS206292		PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		Random Sample Temperature on Receipt: °C	
ORDER NUMBER: -		SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		Other comment:	
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		RELINQUISHED BY: GBP		RECEIVED BY: 	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm		DATE/TIME: 20/1/25 11:32		RECEIVED BY:	
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com							

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCF, OPP, PCB	ph, CEC, clay content									Please forward to Eurofins	Comments
52	GPS_BH03_0.5	15/01/2025	SOIL		2	X														
53	GPS_BH03_1.0	15/01/2025	SOIL		2	X														
54	GPS_BH03_1.5	15/01/2025	SOIL		2	X														
55	GPS_BH03_2.0	15/01/2025	SOIL		2	X														
56	GPS_BH04_0.1	15/01/2025	SOIL		2	X														
57	GPS_BH04_0.5	15/01/2025	SOIL		2		X	X		x										
58	GPS_BH04_1.0	15/01/2025	SOIL		2	X														
59	GPS_BH04_1.5	15/01/2025	SOIL		2	X														
60	GPS_BH04_2.0	15/01/2025	SOIL		2	X														
61	GPS_HA01_0.1	15/01/2025	SOIL		2	X														
62	GPS_HA01_0.5	15/01/2025	SOIL		2		X	X												
63	GPS_HA01_1.0	15/01/2025	SOIL		2	X														
64	GPS_HA02_0.1	15/01/2025	SOIL		2		X	X	X											
TOTAL					0	10	3	3	1	1	0	0	0	0	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



CHAIN OF CUSTODY

ALS Laboratory
please tick →

CLIENT: WSP		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):		FOR LABORATORY USE ONLY (Circle)		
OFFICE: L27 680 George St Sydney 2600		PROJECT: PS206292		ALS QUOTE NO.:		Custody Seal intact? Yes No N/A		
ORDER NUMBER: -		PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		Free ice / frozen ice bricks present upon receipt? Yes No N/A		
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RELINQUISHED BY: GBP		Random Sample Temperature on Receipt: °C		
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		DATE/TIME: 15/1/2025 5:15 pm		Other comment:		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		RECEIVED BY: <i>Farid</i> DATE/TIME: 20/1/25 11:30		RECEIVED BY:		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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).														
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence									Please forward to Eurofins	Comments
65	DPS_HA02_0.75	15/01/2025	SOIL		2	X														
66	DPS_HA02_1.25	15/01/2025	SOIL		2	X														
67	DPS_HA03_0.1	15/01/2025	SOIL		2		X	X												
68	DPS_HA03_0.5	15/01/2025	SOIL		2	X														
69	DPS_HA03_1.0	15/01/2025	SOIL		2	X														
70	DPS_HA03_1.3	15/01/2025	SOIL		2	X														
71	DPS_HA04_0.1	15/01/2025	SOIL		2		X	X	X											
72	DPS_HA04_0.5	15/01/2025	SOIL		2	X														
73	Asbestos Fragments	15/01/2025	SOIL		1					X										
74	DPS_HA05_0.1	15/01/2025	SOIL		2		X	X												
75	DPS_HA05_0.5	15/01/2025	SOIL		2	X														
76	DPS_HA05_0.9	15/01/2025	SOIL		2	X														
77	DPS_HA06_0.1	15/01/2025	SOIL		2		X	X												
TOTAL					0	8	4	4	1	1	0	0	0	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 Bisulfate 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



CHAIN OF CUSTODY

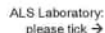
ALS Laboratory
please tick →

CLIENT: WSP		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):		FOR LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A					
OFFICE: L27 680 George St Sydney 2600		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 8 9 OF: 1 2 3 4 5 6 7 8 9			Free ice / frozen ice bricks present upon receipt? Yes No N/A				
PROJECT: PS206292		PROJECT MANAGER: Melinda Collier		CONTACT PH: +61 2 8925 6767		Random Sample Temperature on Receipt: °C			Other comment:		
ORDER NUMBER: -		SAMPLER: Grace Bendall-Pease and Mackenzie Weeks		SAMPLER MOBILE: 0439525947		RECEIVED BY: <i>[Signature]</i>			RECEIVED BY:		
COC emailed to ALS? (YES)		EDD FORMAT (or default): Default		RELINQUISHED BY: GBP		DATE/TIME: 20/1/25 11:30			DATE/TIME:		
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com		DATE/TIME: 15/1/2025 5:15 pm							

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	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).													
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence	TRH, BTEXN, Metals, PAH	TRH, BTEXN						Please forward to Eurofins	Comments
78	DPS_HA06_0.75	15/01/2025	SOIL		2	X													
79	DPS_HA02_1.1	15/01/2025	SOIL		2	X													
80	RINSATE_1	15/01/2025	WATER		2						X								
81	Trip Blank	14/01/2025	SOIL		1							X							
82	Trip Spike	14/01/2025	SOIL		1							X							
83	TSC																		
84	GPS_HA02-0.5																		
TOTAL					0	2	0	0	0	0	1	2	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 Bisulfate 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



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 Bisulfate 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.

CHAIN OF CUSTODY ALS Laboratory: please tick →		QADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8350 0890 E: adelaide@alsglobal.com		QMACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com		QSYDNEY 277-280 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples_sydney@alsglobal.com	
		QBRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples_brisbane@alsglobal.com		QDUNEDOO 27 Sydney Road Dunedoo NSW 2880 Ph: 02 4012 4000 E: dunedoo@alsglobal.com		QTOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville_environmental@alsglobal.com	
CLIENT: WSP		QGLADSTONE 16 Ballamont Road Gladstone QLD 4703 Ph: 07 7471 5800 E: gladstone@alsglobal.com		QPERTH 10 Hind Way Malaga WA 6060 Ph: 08 9447 5377 E: perth@alsglobal.com		QWOLLONGONG 66 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com	
OFFICE: L27 680 George St, Sydney		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):		FOR LABORATORY USE ONLY (Circle)	
PROJECT: School of Infrastructure NSW		ALS QUOTE NO.:		COC SEQUENCE NUMBER (Circle)		Custody Seal Intact? Yes No N/A	
ORDER NUMBER: PS206292				COC: 1 2 3 4 5 6 7 8 9		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
PROJECT MANAGER: Melinda Collier		CONTACT PH: 04 4897 7033		OF: 1 2 3 4 5 6 7 8 9		Random Sample Temperature on Receipt: °C	
SAMPLER: Grace Bendall-Pease		SAMPLER MOBILE: 0439525947		RELINQUISHED BY:		RECEIVED BY:	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default): Default		DATE/TIME:		DATE/TIME:	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com				15/1/25 5:15pm		DATE/TIME:	
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com						RECEIVED BY:	
						DATE/TIME:	
						15/1/25 (72)	
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:							

ALS USE	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).														
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS															Comments
	GPS-HA02-1.2S	15/1/25	SOL		2															
	GPS-HA03-6.1																			
	GPS-HA03-0.5																			
	GPS-HA03-1.0																			
	GPS-HA03-1.3																			
	GPS-HA04-0.1																			
	GPS-HA04-0.5																			
	ACM Fragments				1															
	GPS-HA05-0.1																			
	GPS-HA05-0.5																			
	GPS-HA05-0.9																			
	GPS-HA06-0.1																			
	GPS-HA06-0.7S																			
TOTAL					0	0	0	0	0	0	0	0	0	0	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.



CHAIN OF CUSTODY

ALS Laboratory:
please tick →

ADELAIDE 21 Burma Road Pooraka SA 5095
Ph: 08 8359 0890 E: adelaide@alsglobal.com

QBRISBANE 32 Shand Street Stafford QLD 4053
Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

DMACKAY 78 Harbour Road Mackay QLD 4740
Ph. 07 4944 0177 E. mackay@talsglobal.com
Ph. 07 4944 2505 E. norwa@talsglobal.com

NEWCASTLE 5585 Macquarie Rd Mayfield West NSW 2304
Ph: 02 4014 5500 Fax: 02 4014 5501
Ph: 02 4014 5500 Email: info@pccs.com.au

Q5SYDNEY 277-289 Woodpark Road Smithfield NSW 2164
Ph: 02 8784 8555 E: samples_sydney@alsglobal.com

□TOWNSVILLE 14-15 Deema Court Bohle QLD 4818
Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

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

CLIENT: WSP

OFFICE: L27 680 George St, Sydney

PROJECT: School of Infrastructure NSW

ORDER NUMBER: PS206292

PROJECT MANAGER: Melinda Collier

CONTACT PH: 04 4897 7033

SAMPLER: Grace Bendall-Pease

SAMPLER MOBILE: 0439525947

COC emailed to ALS? (YES / NO)

EDD FORMAT (or default): Default

Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

☐ Standard TAT (List due date):☐ Non Standard or urgent TAT (List due date):

COC SEQUENCE NUMBER (Circle)

COC:	1	2	3	4	5	6	7	8	9
------	---	---	---	---	---	---	---	---	---

OF:	1	2	3	4	5	6	7	8	9
-----	---	---	---	---	---	---	---	---	---

RELINQUISHED BY:

RECEIVED BY:

DATE/TIME:

DATE/TIME:

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?

Free ice / frozen ice bricks present upon receipt?

9 Random Sample Temperature on Receipt:

9 Other comment:

Yes	No	N/A
-----	----	-----

Yes	No	N/A
-----	----	-----

RECEIVED BY:

DATE/TIME:

15/1/25 1721

[illegible]

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.

WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: Melinda Collier

Report 1181226-S

Project name PS206292

Project ID PS206292

Received Date Jan 28, 2025

Client Sample ID			QC101
Sample Matrix			Soil
Eurofins Sample No.			S25-Ja0042580
Date Sampled			Jan 15, 2025
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	62
TRH C29-C36	50	mg/kg	66
TRH C10-C36 (Total)	50	mg/kg	128
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	110
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	110
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5

Client Sample ID			QC101
Sample Matrix			Soil
Eurofins Sample No.			S25-Ja0042580
Date Sampled			Jan 15, 2025
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	105
p-Terphenyl-d14 (surr.)	1	%	120
Heavy Metals			
Arsenic	2	mg/kg	6.2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	15
Copper	5	mg/kg	21
Lead	5	mg/kg	15
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	8.4
Zinc	5	mg/kg	49
Sample Properties			
% Moisture	1	%	10

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jan 31, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jan 31, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Jan 31, 2025	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Jan 31, 2025	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Jan 31, 2025	14 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Jan 31, 2025	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Jan 28, 2025	14 Days



Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
---	--	--	--	---	--

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554
--

Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
---	--	--	--

Company Name:

Address:

Project Name:

Project ID:

WSP Australia P/L NSW

Level 27, Ernst & Young Centre

Sydney

NSW 2001

PS206292

PS206292

Order No.:

Report #:

Phone:

Fax:

1181226

02 9272 5586

02 9272 5101

Received:

Due:

Priority:

Contact Name:

Jan 28, 2025 12:30 PM

Feb 4, 2025

5 Day

Melinda Collier

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	QC101	Jan 15, 2025		Soil	S25-Ja0042580	X	X	X	X	X
Test Counts						1	1	1	1	1

Eurofins Environment Testing 179 Magowar Road, Girraween NSW, Australia, 2145
ABN : 50 005 085 521 Telephone: +61 2 9900 8400

Page 4 of 10

Date Reported:Feb 05, 2025

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ppm: parts per million
µg/L: micrograms per litre	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	Colour: Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	118			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14			%	74			70-130	Pass	
TRH C6-C10			%	116			70-130	Pass	
TRH >C10-C16			%	73			70-130	Pass	
LCS - % Recovery									
BTEX									
Benzene			%	92			70-130	Pass	
Toluene			%	95			70-130	Pass	
Ethylbenzene			%	78			70-130	Pass	
m&p-Xylenes			%	78			70-130	Pass	
o-Xylene			%	77			70-130	Pass	
Xylenes - Total*			%	78			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
Naphthalene			%	86			70-130	Pass	
LCS - % Recovery									
Polycyclic Aromatic Hydrocarbons									
Acenaphthene			%	106			70-130	Pass	
Acenaphthylene			%	98			70-130	Pass	
Anthracene			%	108			70-130	Pass	
Benz(a)anthracene			%	101			70-130	Pass	
Benzo(a)pyrene			%	106			70-130	Pass	
Benzo(b&j)fluoranthene			%	103			70-130	Pass	
Benzo(g,h,i)perylene			%	102			70-130	Pass	
Benzo(k)fluoranthene			%	112			70-130	Pass	
Chrysene			%	109			70-130	Pass	
Dibenz(a,h)anthracene			%	105			70-130	Pass	
Fluoranthene			%	105			70-130	Pass	
Fluorene			%	107			70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	106			70-130	Pass	
Naphthalene			%	102			70-130	Pass	
Phenanthrene			%	109			70-130	Pass	
Pyrene			%	110			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	100			80-120	Pass	
Cadmium			%	103			80-120	Pass	
Chromium			%	100			80-120	Pass	
Copper			%	99			80-120	Pass	
Lead			%	103			80-120	Pass	
Mercury			%	104			80-120	Pass	
Nickel			%	101			80-120	Pass	
Zinc			%	100			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S25-Ja0042213	NCP	%	100			70-130	Pass	
TRH C10-C14	S25-Fe0002121	NCP	%	71			70-130	Pass	
TRH C6-C10	S25-Ja0042213	NCP	%	100			70-130	Pass	
TRH >C10-C16	S25-Fe0002121	NCP	%	74			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S25-Ja0042213	NCP	%	86			70-130	Pass	
Toluene	S25-Ja0042213	NCP	%	90			70-130	Pass	
Ethylbenzene	S25-Ja0042213	NCP	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	S25-Ja0042213	NCP	%	95			70-130	Pass	
o-Xylene	S25-Ja0042213	NCP	%	91			70-130	Pass	
Xylenes - Total*	S25-Ja0042213	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S25-Ja0042213	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S25-Ja0043712	NCP	%	102			70-130	Pass	
Acenaphthylene	S25-Ja0043712	NCP	%	95			70-130	Pass	
Anthracene	S25-Ja0043712	NCP	%	108			70-130	Pass	
Benz(a)anthracene	S25-Ja0043712	NCP	%	102			70-130	Pass	
Benzo(a)pyrene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Benzo(g,h,i)perylene	S25-Ja0043712	NCP	%	91			70-130	Pass	
Benzo(k)fluoranthene	S25-Ja0043712	NCP	%	113			70-130	Pass	
Chrysene	S25-Ja0043712	NCP	%	111			70-130	Pass	
Dibenz(a,h)anthracene	S25-Ja0043712	NCP	%	106			70-130	Pass	
Fluoranthene	S25-Ja0043712	NCP	%	117			70-130	Pass	
Fluorene	S25-Ja0043712	NCP	%	108			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S25-Ja0043712	NCP	%	101			70-130	Pass	
Naphthalene	S25-Ja0043712	NCP	%	100			70-130	Pass	
Phenanthrene	S25-Ja0043712	NCP	%	109			70-130	Pass	
Pyrene	S25-Ja0043712	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S25-Ja0041337	NCP	%	91			75-125	Pass	
Cadmium	S25-Ja0041337	NCP	%	91			75-125	Pass	
Chromium	S25-Ja0041337	NCP	%	89			75-125	Pass	
Copper	S25-Ja0041337	NCP	%	89			75-125	Pass	
Lead	S25-Ja0041337	NCP	%	91			75-125	Pass	
Mercury	S25-Ja0041337	NCP	%	88			75-125	Pass	
Nickel	S25-Ja0041337	NCP	%	90			75-125	Pass	
Zinc	S25-Ja0041337	NCP	%	89			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S25-Fe0002119	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S25-Ja0043767	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S25-Ja0043767	NCP	mg/kg	100	100	2.0	30%	Pass	
TRH C29-C36	S25-Ja0043767	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S25-Fe0002119	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S25-Ja0043767	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S25-Ja0043767	NCP	mg/kg	110	110	1.0	30%	Pass	
TRH >C34-C40	S25-Ja0043767	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S25-Ja0042211	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S25-Fe0002119	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S25-Fe0002119	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S25-Fe0002119	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S25-Fe0002119	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S25-Ja0041336	NCP	mg/kg	2.1	2.3	9.0	30%	Pass
Cadmium	S25-Ja0041336	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	S25-Ja0041336	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S25-Ja0041336	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Zinc	S25-Ja0041336	NCP	mg/kg	19	18	6.0	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	N25-Ja0042371	NCP	%	13	14	7.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Nileshni Goundar	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Ryan Phillips	Senior Analyst-Sample Properties
Raymond Siu	Senior Analyst-Volatile
Roopesh Rangarajan	Senior Analyst-Organic



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



CHAIN OF CUSTODY
ALS Laboratory
please tick →

CLIENT: WSP	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Oranics)		☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):	
OFFICE: L27 680 George St Sydney 2000	ALS QUOTE NO.:		FOR LABORATORY USE ONLY (Circle)	
PROJECT: PS200292	CONTACT PH: +61 2 8925 6767		Custody Seal intact? Yes No N/A	
ORDER NUMBER: -	PROJECT MANAGER: Melinda Collier		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
SAMPLER: Grace Bendall-Pease and Mackenzie Weeks	SAMPLER MOBILE: 0439525947		Random Sample Temperature on Receipt: 16.3 °C	
COC emailed to ALS? (YES)	EDD FORMAT (or default): Default		RECEIVED BY: <i>Brand</i>	
Email Reports to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com	DATE/TIME: 15/1/2025 5:15 pm		DATE/TIME: 28/1/2025	
Email Invoice to: melinda.collier@wsp.com & grace.bendall-pease@wsp.com	RELINQUISHED BY: <i>Brand</i>		DATE/TIME: 28/1/2025	
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:				

SAMPLE DETAILS		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).																
ALS USE	MATRIX: SOLID (S) WATER (W)	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD	asbestos (NEPM)	TRH, BTEXN, PAH metals (8)	OCP, OPP, PCB	Asbestos presence/absence										
LAB ID	SAMPLE ID																			
	QC101	15/01/2025	SOIL		1			x												

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402

Sample Receipt Advice

Company name: WSP Australia P/L NSW
Contact name: Melinda Collier
Project name: PS206292
Project ID: PS206292
Turnaround time: 5 Day
Date/Time received: Jan 28, 2025 12:30 PM
Eurofins reference: 1181226

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 16.3 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Bonnie Pu on phone : or by email: Bonnie.Pu@eurofinsanz.com

Results will be delivered electronically via email to Melinda Collier - Melinda.Collier@wsp.com.

Note: A copy of these results will also be delivered to the general WSP Australia P/L NSW email address.



Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 T: +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
---	--	--	--	---	--

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554
--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose, Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise, Mount Wellington, Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 +64 9 525 0568 IANZ# 1402
---	--	--	--

Company Name:

Address:

Project Name:

Project ID:

WSP Australia P/L NSW

Level 27, Ernst & Young Centre

Sydney

NSW 2001

PS206292

PS206292

Order No.:

Report #:

Phone:

Fax:

1181226

02 9272 5586

02 9272 5101

Received:

Due:

Priority:

Contact Name:

Jan 28, 2025 12:30 PM

Feb 4, 2025

5 Day

Melinda Collier

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	QC101	Jan 15, 2025		Soil	S25-Ja0042580	X	X	X	X	X
Test Counts						1	1	1	1	1

APPENDIX D

HISTORICAL AERIAL PHOTOS











Legend  Site boundary

Historical Aerial – December 2018









Legend  Site boundary

Historical Aerial – 2010





Legend Site boundary

Historical Aerial – 2005









Legend Site boundary

Historical Aerial – 1991



Legend □ Site boundary

Historical Aerial – 1986







Legend  Site boundary

Historical Aerial – 1947

APPENDIX E

PHOTOGRAPHIC LOG



Photo No. 1	Date 14/1/2025	DIRECTION 133 deg(T) 33.94766°S 150.87129°E ACCURACY 10 m DATUM WGS84 DPS-HA04 2025-01-14 14:03:24+11:00
Description HA04 soil profile.		

Photo No. 2	Date 14/1/2025	
Description BH01 natural clay		

	Photographic Log	
	Dalmeny Public School	PS206292

Photo No. 3	Date 14/1/2025	
Description HA01 fill and natural clay		

Photo No. 4	Date 14/1/2025	
Description HA02 soil profile.		

	Photographic Log	
	Dalmeny Public School	PS206292

Photo No.	Date	
5	14/1/2025	
Description		
BH01 soil profile below 1.5 m		

Photo No.	Date	
6	14/1/2025	
Description		
BH02 natural clay soil profile		

APPENDIX F

BORE LOGS





NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : DPS-BH01

CLIENT : SINSW

PROJECT : SINSW UPS T23-24

FILE / JOB NO : PS206292

LOCATION : Dalmeny Public School

SHEET : 1 OF 1

POSITION : E: 303257.0, N: 6241612.0 (MGA2020-56)

SURFACE ELEVATION : 36.00 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track

CONTRACTOR : Stratacore

DRILLER : RM

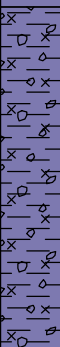
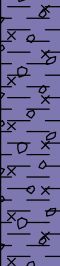
DATE STARTED : 14/1/2025

DATE COMPLETED : 14/1/2025

DATE LOGGED : 14/1/2025

LOGGED BY : TD

CHECKED BY : JD

DRILLING					MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER										
HA AD/T		E		ES 0.10m	0.0 36.0			TOPSOIL Clayey SAND: fine to medium grained, brown to dark brown, clay is low plasticity clay.	D		TOPSOIL DPS_BH-1_0.1: PID = 3.2
		F		0.30m				FILL Sandy Silty CLAY: low to medium plasticity, brown, sand is fine grained; trace fine to coarse grained, subangular gravel.			FILL Plastic mesh observed at 0.3 m DPS_BH01_0.5: PID = 4.9
				D ES 0.50m			0.55m: colour becoming grey mottled red brown			DPS_BH-1_1.0: PID = 2.3	
		H		SPT 5,9,8 N=17	1.0 35.0			Sandy Silty CLAY: medium to high plasticity, dark brown and red brown, sand is fine to medium grained.	w<PL	VSt	ALLUVIAL SOIL DPS_BH-1_1.5: PID = 3.2
					1.30m			Silty CLAY: medium to high plasticity, grey mottled red brown, trace fine to medium grained, subangular to subrounded gravel.			RESIDUAL SOIL
					1.65m						
					1.95m						
		VH	Not Encountered	SPT 4,9,12 N=21	2.0 34.0				w<PL	VSt	
							3.00m		SILTSTONE, pale grey to dark grey mottled orange, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.		
					3.45m						
				SPT 4,10/20mm HB N=R 4.67m	4.0 32.0						
					5.0 31.0						
					6.0 30.0			Hole Terminated at 6.00 m Target depth			
					7.0 29.0						
					8.0 28.0						

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.

WSP-AU 5.07.2.LIB, UPDATED 7.12.23, GLB Log IS AU BOREHOLE 2A, PS206292 2ND MOB GPJ <<DrawingFile>> 2/2/2025 21:30, 10.03.00.00, Dated Lab and in Situ Test - DCD (Lib: WSP 5.07.2.2023.10.30, Pj: WSP 5.05.2.2023.08.23)



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : DPS-BH02

CLIENT : SINSW

PROJECT : SINSW UPS T23-24

FILE / JOB NO : PS206292

LOCATION : Dalmeny Public School

SHEET : 1 OF 1

POSITION : E: 303263.0, N: 6241605.0 (MGA2020-56)

SURFACE ELEVATION : 36.00 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track

CONTRACTOR : Stratacore

DRILLER : RM

DATE STARTED : 14/1/2025 DATE COMPLETED : 14/1/2025

DATE LOGGED : 14/1/2025

LOGGED BY : KC

CHECKED BY : JD

DRILLING						MATERIAL						
PROGRESS		DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations	
DRILLING & CASING	WATER											
HA		E		ES 0.10m	0.0 36.0			TOPSOIL Clayey SAND: fine to medium grained, brown to dark brown, clay is low plasticity clay.	D		TOPSOIL DPS-BH02_0.1	
		F		0.30m ES 0.50m				FILL Sandy Silty CLAY: low to medium plasticity, brown, sand is fine grained; trace fine to coarse grained, subangular gravel. becoming grey mottled red brown	w<PL		FILL DPS-BH02_0.5	
AD/T			H	Not Encountered	SPT 4,7,8 N=15	1.0 35.0						DPS-BH02_1.0
								1.30m Cl	1.40m	Sandy Silty CLAY: medium plasticity, brown, sand is fine to medium grained; trace fine grained, subangular to subrounded gravel. Sandy Silty CLAY: medium to high plasticity, pale grey mottled red brown, sand is fine to medium grained; trace fine to medium grained, subangular siltstone gravel.	w<PL	St
		VH			2.0 34.0							DPS-BH02_2.0: PID
								2.80m	3.0 33.0	Cl-CH	Increasing gravel content, colour becoming grey to dark grey	w<PL
				3.45m								INFERRED WEATHERED ROCK
										3.30m	SILTSTONE, pale grey to dark grey, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.	
					4.0 32.0							
				SPT 10/145mm HB N=R 4.65m	5.0 31.0							
					6.0 30.0							
					7.0 29.0							
					8.0 28.0							

See Explanatory Notes for details of abbreviations & basis of descriptions.



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : DPS-BH03

CLIENT : SINSW

PROJECT : SINSW UPS T23-24

FILE / JOB NO : PS206292

LOCATION : Dalmeny Public School

SHEET : 1 OF 1

POSITION : E: 303258.0, N: 6241601.0 (MGA2020-56)

SURFACE ELEVATION : 36.00 (AHD)

ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Commachio 300 MOUNTING : Track

CONTRACTOR : Stratacore

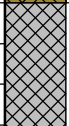
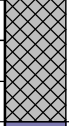
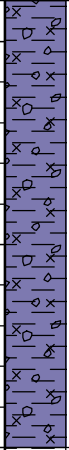
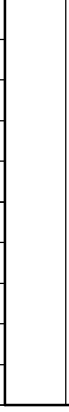
DRILLER : RM

DATE STARTED : 14/1/2025 DATE COMPLETED : 14/1/2025

DATE LOGGED : 14/1/2025

LOGGED BY : KC

CHECKED BY : JD

DRILLING						MATERIAL							
PROGRESS		DRILLING & CASING	WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	GROUP SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
DRILLING & CASING	WATER												
HA	AD/T			E	Not Encountered	ES	0.0 36.0			TOPSOIL Clayey SAND: fine to medium grained, brown to dark brown, clay is low plasticity; with rootlets.	D		TOPSOIL DPS_BH03_0.1: PID = 2.2
				F		0.50m ES		0.20m	FILL Silty CLAY: pale grey mottled red, with fine grained sand; trace fine grained, subangular gravel.	w<PL		FILL DPS_BH03_0.5: PID = 3.4	
							1.0 35.0			Increasing sand content, becoming Sandy Silty CLAY	D		DPS_BH03_1.0: PID = 4.2
				H		SPT 4,6,6 N=12 1.95m	2.0 34.0		CI-CH	Silty CLAY: medium to high plasticity, pale grey mottled red brown, trace fine grained, subangular to subrounded gravel.			RESIDUAL SOIL DPS_BH03_1.5: PID = 4.3 1.60: PP =500 kPa
							2.70m			trace subangular ironstone gravel	w<PL		DPS_BH03_2.0: PID = 6.2
						SPT 3,8,14 N=22 3.45m	3.0 33.0		CI-CH				3.10: PP =500 kPa
				VH		SPT 10/10mm HB N=R 4.51m	4.0 32.0			SILTSTONE, pale grey to dark grey mottled orange, inferred very low strength, extremely weathered, recovered as Gravelly Silty CLAY, medium to high plasticity, gravel is fine grained, sub-angular to angular.			INFERRED WEATHERED ROCK
							6.0 30.0			Hole Terminated at 6.00 m Target depth			
							7.0 29.0						
							8.0 28.0						

See Explanatory Notes for

See Explanatory Notes for details of abbreviations & basis of descriptions.



HAND AUGER: DPS_HA01

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to medium grained, brown to dark brown, clay is low to medium plasticity.	w<PL		TOPSOIL rootlets observed
			0.2	0.20	ES 0.10 m GPS_HA01_0.1 PID 4.7 ppm				FILL Silty CLAY: low to medium plasticity, pale grey mottled red, trace fine grained sand; trace fine grained, subangular gravel.			FILL
			0.4									
			0.6		ES 0.50 m GPS_HA01_0.5 PID 2.0 ppm					w<PL		
			0.8	0.80					FILL Silty CLAY: as above increasing sand content, becoming sandy silty CLAY			
			1.0		ES 1.00 m GPS_HA01_1.0 PID 1.00 m 3.7 ppm					w<PL		
			1.2									
			1.4	1.40					Silty CLAY: medium to high plasticity, pale grey mottled red, trace fine grained, subangualr to subrounded gravel; trace gravel.	w<PL	VSt	ALLUVIAL SOIL
			1.50		PID 3.4 ppm							
									Hole Terminated at 1.50 m			
			1.6									
Comments											Checked Date	



HAND AUGER: DPS_HA02

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0						TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.			TOPSOIL rootlets observed
			0.2	0.20	ES 0.10 m DPS_HA02_0.1 PID 4.3 ppm				FILL Silty CLAY: low to medium plasticity, pale grey mottled red, trace fine grained sand; trace fine grained, subangular gravel.	D		FILL
			0.4									
			0.6		ES 0.50 m DPS_HA02_0.5 PID 1.4 ppm					w<PL		
			0.8	0.80					FILL Silty CLAY: as above increasing sand content, becoming Sandy Silty CLAY			
			1.0		ES 1.00 m DPS_HA02_1.0 PID 1.4 ppm					w<PL		
			1.2									
			1.4	1.40					Silty CLAY: medium to high plasticity, pale grey mottled red, trace fine grained, subangualr to subrounded gravel.			RESIDUAL SOIL
			1.5	1.50	ES 1.50 m DPS_HA02_1.5 PID 3.7 ppm					w<PL	St	
									Hole Terminated at 1.50 m			
			1.6									
Comments											Checked Date	

WSP-AU 5.07.3 LIB.GLB Log IS AU BOREHOLE 3 DRAFT DALMENY_2NDMOB_HALOGS.GPJ <<DrawingFile>> 7/2/2025 11:48 10.03.00.09 Dargel Lab and In Situ Tool - DGD | Lib: WSP 5.07.3 2023-12-04 Proj: WSP 5.07.3 2023-12-04



HAND AUGER: DPS_HA03

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description								
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
BH			0.0		ES 0.1 m DPS_HA03_0.1 QC101/101A PID 3.2 ppm				TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity; with rootlets.	D		TOPSOIL rootlets observed		
			0.10					FILL Silty GRAVEL: fine to medium, brown-grey.			FILL			
			0.2		ES 0.50 m DPS_HA03_0.5 PID 3.5 ppm									
			0.4											
			0.6		ES 1.00 m DPS_HA03_1.0 PID 3.9 ppm									
		0.8												
		1.0		ES 1.50 m DPS_HA03_1.5 PID 2.9 ppm										
		1.2												
		1.4	1.40		ES 1.50 m DPS_HA03_1.5 PID 2.9 ppm				Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand, subangular to subrounded gravel.	w<PL	St	RESIDUAL SOIL		
		1.50							Hole Terminated at 1.50 m					
			1.6											
Comments										Checked Date				



HAND AUGER: DPS_HA04

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description							
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			0.0		ES 0.10 ppm DPS_HA04_0.1 PID 3.9 ppm				TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.	D			TOPSOIL rootlets observed
			0.10						FILL Silty Sandy CLAY: low to medium plasticity, red brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel gravel.				FILL
			0.2							w<PL			
			0.4		ES DPS_HA04_0.5 PID 5.3 ppm								
			0.6										
			0.8	0.80					FILL Silty GRAVEL: fine to medium, brown grey.				
			1.0		ES 1.00 m DPS_HA04_1.0 PID 5.5 ppm					w<PL			
			1.2										
			1.4	1.40									
			1.50		ES 1.50 m DPS_HA04_1.5 PID 2.6 ppm				Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand.	w<PL	St		RESIDUAL SOIL
									Hole Terminated at 1.50 m				
			1.6										
Comments										Checked Date			

WSP-AU 5.07.3 LIB.GLB Log IS AU BOREHOLE 3 DRAFT DALMENY_2NDMOB_HALOGS.GPJ <<DrawingFile>> 7/2/2025 11:48 10.03.00.09 Dargel Lab and In Situ Tool - DGD | Lib: WSP 5.07.3 2023-12-04 Proj: WSP 5.07.3 2023-12-04



HAND AUGER: DPS_HA05

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description								
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
HA			0.0		ES 0.10 m DPS_HA05_0.1 PID 4.7 ppm				TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.	D		TOPSOIL rootlets observed		
				FILL Silty CLAY: medium plasticity, grey mottled red.						FILL				
			0.2		ES 0.10 m DPS_HA05_0.5 PID 0.2 ppm						w<PL			
			0.4											
			0.6											
0.8		ES 1.0 m DPS_HA05_1.0 PID 0.3 ppm												
1.0														
1.2		ES 1.50 m DPS_HA05_1.5 PID 0.5 ppm												
1.4														
		1.50							Hole Terminated at 1.50 m					
			1.6											
Comments													Checked Date	



HAND AUGER: DPS_HA06

Sheet 1 of 1

Project: Dalmeny Public School Upgrade

Location: Dalmeny Public School, 1612 Dalmeny Dr, Prestons NSW 2170

Client: School Infrastructure NSW

Job No.: PS206292

Contractor: Drill Rig:

Inclination: -90°

Date Started: 14/1/2025

Date Completed: 14/1/2025

Logged: GBP/MW

Drilling				Sampling		Field Material Description								
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	GROUP SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
HA			0.0		ES 0.10 m DPS_HA06_0.1 PID 0.5 ppm				TOPSOIL Clayey SAND: fine to coarse grained, brown, clay is low to medium plasticity.	D			TOPSOIL rootlets observed	
			0.10						FILL Silty Sandy CLAY: low to medium plasticity, red brown, sand is fine to medium grained; trace fine to medium grained, subangular to subrounded gravel.				FILL	
			0.2											
			0.4		ES 0.50 m DPS_HA06_0.5 PID 0.6 ppm					w<PL				
			0.6											
		0.8	0.80						FILL Silty GRAVEL: fine to medium, brown grey.					
		1.0		ES 1.00 m DPS_HA06_1.0 PID 0.4 ppm										
		1.2								w<PL				
		1.4	1.40											
		1.50		ES 1.50 m DPS_HA06_1.5 PID 0.3 ppm					Silty CLAY: medium plasticity, grey mottled red, trace fine grained sand.	w<PL	St		RESIDUAL SOIL	
									Hole Terminated at 1.50 m					
			1.6											
Comments												Checked Date		