

23 May 2025

Ref: EP0689.Ltr1.V1

**ROAM Architects**

94 Errol Street,

North Melbourne VIC 3051



Attention: Amanda Robinson

**RE: Waste Soil Classification**

**Project: Emmaus Catholic Primary School**

## 1. Investigation Summary

<b>Soil type:</b>		<i>In situ</i>
<b>Volume of waste soil classified:</b>		2,500 m <sup>3</sup>
<b>Soil Category in accordance EPA Publication 1828.3 September 2024:</b>		Fill Material
<b>Contaminants exceeding Fill Material Criteria:</b>		
Nil		
<b>Recommendations:</b>	<b>Reasoning:</b>	
<b>Additional Sampling – No</b>	N/A	
<b>Waste Designation – No</b>	N/A	

## 2. Introduction

Geotesta was engaged by Amanda Robinson (ROAM Architects) to undertake a site inspection and implement a soil sampling and analysis program at Emmaus Catholic Primary School ('the site') located on 370 Sydenham Road, Sydenham. The program aimed to provide a waste classification for soil to be generated as part of the new building works in the southwestern portion of the site.

The purpose of this letter is to provide the findings of the sampling and analysis program and the classification of waste soil in accordance with the "Waste Disposal Categories Characteristics and Thresholds Publication 1828.3" and EPA Industrial Waste Resource Guidelines, Publications IWRG702.2.

## 3. Scope of works

### 2.1 Testing requirements

<b>Soil type</b>	In-situ
<b>Amount of waste soil classified</b>	2,500 m <sup>3</sup>
<b>Minimum samples required to comply with EPA IWRG 702.2 Publication</b>	10 samples

<b>Method of collection</b>	Hand Auger
<b>Number of sample locations</b>	5 locations
<b>Number of primary samples</b>	10 samples

## 2.2 Laboratory analysis

<b>EPA Publication 1828.3 Waste Screen</b>	1 sample
<b>Reduced list of chemicals (TRH, BTEXN, PAH and Metals)</b>	9 samples
<b>Metals (QA/QC)</b>	1 sample

## 4. Results

### 3.1 Investigation details

<b>Inspection date</b>	09/05/2025
<b>Soil description</b>	Sand/silty sand, grey-brown, rootlets
<b>Odours/Visual contamination</b>	Nil
<b>Foreign objects/materials</b>	Geofabric (BH1)
<b>Geology</b>	Newer Volcanics

### 3.2 Chemicals/Contaminants above Fill Material upper limits

<b>Chemicals/ Contaminants</b>	<b>Maximum concentration recorded (mg/kg)</b>	<b>Fill Material upper limit (mg/kg)</b>	<b>Category D upper limit total / leachability (mg/kg) / (mg/L)</b>	<b>95% UCL<sub>average</sub></b>	<b>ASLP* results (mg/L)</b>
Nickel	99	60	3,000 / 1	56.21	NR

*Note: NR - Not required*

Nickel was the only chemical to exceed the EPA Publication 1828.3 “Fill Material” criteria of 60mg/kg. Statistical analysis conducted on nickel concentrations indicated a 95% UCL<sub>average</sub> of 56.21mg/kg, which is below the fill material upper limits.

No potential asbestos-containing material was observed during fieldwork.

### 3.3 Analytical QA/QC Procedures

Quality control is achieved by utilising NATA-accredited laboratories, using standard methods supported by internal duplicates, the checking high, abnormal, or otherwise anomalous results against background and other chemical results for the sample concerned.

Quality assurance is achieved by confirming field or anticipated results based on the comparison of field observations with laboratory results. In addition, the laboratory undertakes additional duplicate analysis as part of its internal quality assurance program based on one duplicate for every 20 analysed.

Field observations are reconciled against laboratory results when they are not as expected, and confirmation, re-sampling and re-analysis are undertaken if results cannot be correlated.

Field supplicates provide a check on the analytical performance of the laboratory. At least 5 percent of soil samples (1 to 20) from a site are collected in duplicate. The precision of a duplicate determination can be measured as relative percentage difference (RPD). For duplicate samples, because of errors associated with field splitting, an RPD of between 80 to 150% (depending on the substance) will be allowed. Soil heterogeneity due to the “nugget effect” could results in significantly greater differences. Consequently, samples with the most observable field homogeneity are selected. Any value >50% RPD will be noted and discussed, as per Standards Australia requirements, with respect to it acceptability for inclusion in the dataset.

A duplicate sample was collected and analysed by the Primary Laboratory (ALS). The duplicate samples were BH1 at 0.5m and DUP. The table below presents the RPD results for the duplicate collected and pairs of results obtained above the laboratory detected limits.

Chemicals	BH1 0.2	DUP	RPD %
Arsenic	19	18	5.4
Cadmium	<1	<1	NC
Chromium	-	32	NC
Copper	34	25	30.5
Lead	<5	5	NC
Nickel	41	36	13
Zinc	55	58	5.3

*\*Tests where the concentration is below the laboratory limit of reporting cannot be calculated and has been denoted 'NC'.*

A total of 7 pairs of analyses were available for assessment. The RPD for the duplicate samples analysed by the primary laboratory were all below 50%. Based on the laboratory QA/QC and the duplicate results, the data is considered suitable for use in this assessment of the site.

## 5. Conclusions

### EPA Waste Transport Information

Waste Code per Schedule 5	N122
Soil Category in accordance EPA 1828.3 September 2024	Fill Material
Priority Waste	No
Pre-Classified ('Pre') or Mirror Code ('M')	Pre

The sampling and analysis program conducted indicates that soils on site can be classified as **“Fill Material”** in accordance with EPA Publication 1828.3 September 2024 “Waste Disposal Categories Characteristics and Thresholds Guideline”. The material can be reused on or off-site as fill material.

This conclusion is based on the site inspection and sampling analysis program conducted. If during the excavation works soil conditions vary greatly from those described in this letter report or unusual conditions are encountered, such as odorous or discoloured soil, we should be contacted immediately to assess the situation.

Should you have any queries regarding this letter, please do not hesitate to contact the undersigned on 0479 163 899 or email [so@geotesta.com.au](mailto:so@geotesta.com.au).

Yours faithfully



**Sean O'Dwyer**

Senior Environmental Scientist

**DOCUMENT CONTROL**

<b>Date:</b>	<b>Version:</b>	<b>Report Prepared By:</b>	<b>Report Reviewed By:</b>
23 May 2025	EP0689.Ltr1.V1	Dilara Yesilbas Environmental Engineer	Sean O'Dwyer Senior Environmental Scientist

## **Disclaimer**

This disclaimer combined applies to use of this report. This report was prepared in accordance with the contracted scope of services. There were several constraints (cost, time etc.) and can affect the integrity and completeness of the environmental investigation.

This report has been prepared solely for use by and is confidential to the client who contracted the scope of services and Geotesta accepts no responsibility for its use by other parties.

The contract for the preparation of this report includes express limitations upon the liability of Geotesta, which should be considered carefully. This report is subject to copyright protection and the copyright owner reserves its rights and the report does not constitute legal advice.

This report must be read in conjunction with the Statement of Qualifications and Limitations contained within it.

## **Statement of Qualifications and Limitations**

It is impossible to identify all contaminants in soil and there are potential risks when investigating contaminated sites. As such, Geotesta has prepared the following information which details the limitations of this environmental report.

During the preparation of this report, Geotesta has relied on client/third party information which was not verified by Geotesta and Geotesta does not accept responsibility for omissions or inaccuracies in the client/third party information.

This report is based solely on the specific instructions received from its client and/or the scope of work agreed between Geotesta and its client. Those instructions and/or scope of work may not fully be described in this report.

This report is based on the site conditions identified at the time of inspection. It is not possible to identify all contamination or potential contaminants in or under the surface of the site.

Investigations undertaken in respect of this report may have been constrained by the particular site conditions such as the locations of buildings, vegetations and services. Therefore, not all the site contaminants or potential contaminants may have been identified in this report.

No warranties express or implied, as to the accuracy or completeness of the matters contained within it are made.

Although normal standards of professional practice have been applied, the absence of any identified potential for air, soil or groundwater impacts on the subject property should not be interpreted as a conclusion that impacts do not exist on the site.

Subsurface conditions can differ across the site, which cannot be wholly defined by investigation. Therefore, it is unlikely that the results and estimations presented in

this report will reflect the extremes of conditions within the site. Subsurface conditions including impact concentrations can change in a limited period. Any information provided may be based on "spot" tests. Conditions may vary between or beyond those locations from the interpreted conditions based on the actual data.

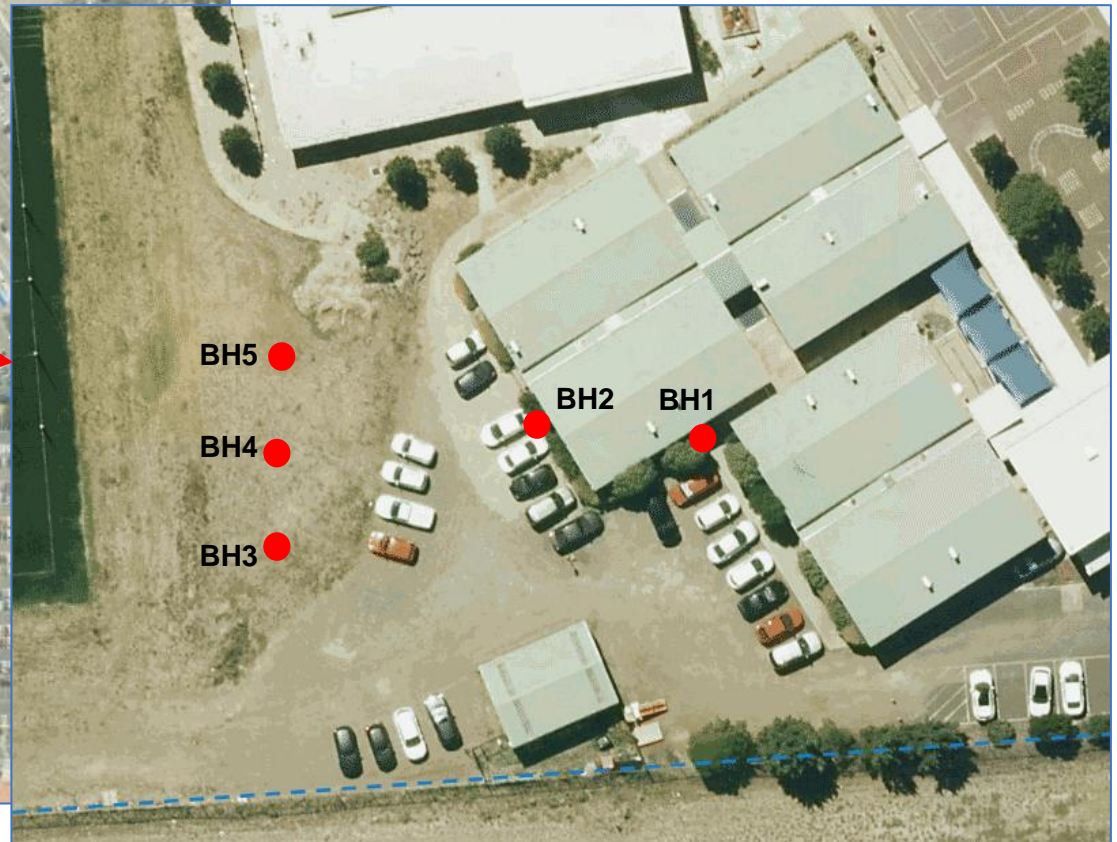
The analyses, evaluations, opinions, and conclusions presented in this report are based on the information provided, and they could change if the information is in fact found to be unrepresentative of conditions between sampling and analysis locations.

The assessment and remediation of contamination is a developing science. Clean Up technology is constantly changing as scientific information on data collection, risk assessment, toxicology and remediation technologies are published. Further, opinions can vary as to the criterion for whether particular conditions constitute contamination, and if so, how that contamination should be addressed or remediated. Different persons might reasonably or otherwise form opinions different to those of Geotesta.

To ensure its contextual integrity, the report must be read in its entirety and should not be copied, distributed, or referred to in part only. Geotesta makes no determination or recommendation regarding a decision whether to acquire or provide financing with respect to the site.

**ATTACHMENT 1**  
**BOREHOLE LOCATIONS**







**ATTACHMENT 2**  
**LABORATORY CERTIFICATES AND CHAIN OF CUSTODY FORMS**



## CERTIFICATE OF ANALYSIS

**Work Order** : EM2507991  
**Client** : GEOTESTA  
**Contact** : ENVIRO  
**Address** : UNIT 6, 31-37 HOWLEYS ROAD  
NOTTING HILL 3168  
**Telephone** : ----  
**Project** : EP0689  
**Order number** : ----  
**C-O-C number** : ----  
**Sampler** : DY  
**Site** : ----  
**Quote number** : EM24GEOTES0001 - VIC Custom Quote  
**No. of samples received** : 11  
**No. of samples analysed** : 11

**Page** : 1 of 16  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Josh Alexander  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
**Telephone** : +61-3-8549 9600  
**Date Samples Received** : 09-May-2025 14:05  
**Date Analysis Commenced** : 13-May-2025  
**Issue Date** : 16-May-2025 12:24



Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Jarwis Nheu	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC



## 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.

- EG048G: EM2507986 #14, Poor matrix spike recovery for Hexavalent Chromium due to sample matrix interferences. Confirmed by re-analysis.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074-UT: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP074-UT: Where reported, Sum of trichlorobenzenes is the sum of the reported concentrations of 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene, and 1,3,5-Trichlorobenzene at or above the LOR.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EA001: pH in soil using 0.01M CaCl extract</b>									
pH (CaCl2)	----	0.1	pH Unit		5.6	----	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		15.0	17.7	9.7	6.2	7.0
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Molybdenum	7439-98-7	2	mg/kg		3	----	----	----	----
Selenium	7782-49-2	5	mg/kg		<5	----	----	----	----
Silver	7440-22-4	2	mg/kg		<2	----	----	----	----
Tin	7440-31-5	5	mg/kg		<5	----	----	----	----
Arsenic	7440-38-2	5	mg/kg		19	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		----	47	26	21	34
Copper	7440-50-8	5	mg/kg		34	14	27	29	10
Lead	7439-92-1	5	mg/kg		<5	9	8	<5	9
Nickel	7440-02-0	2	mg/kg		41	31	88	99	28
Zinc	7440-66-6	5	mg/kg		55	31	75	51	21
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG048: Hexavalent Chromium (Alkaline Digest)</b>									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	----	----	----	----
<b>EK026SF: Total CN by Segmented Flow Analyser</b>									
Total Cyanide	57-12-5	1	mg/kg		<1	----	----	----	----
<b>EK040T-P: Total Fluoride by Auto Analyser</b>									
Fluoride	16984-48-8	40	mg/kg		<40	----	----	----	----
<b>EP066: Polychlorinated Biphenyls (PCB)</b>									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
<b>EP074A: Monocyclic Aromatic Hydrocarbons</b>									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP074A: Monocyclic Aromatic Hydrocarbons - Continued</b>									
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
<b>EP074H: Naphthalene</b>									
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
<b>EP074I: Volatile Halogenated Compounds</b>									
Vinyl chloride	75-01-4	0.02	mg/kg		<0.02	----	----	----	----
1,1-Dichloroethene	75-35-4	0.01	mg/kg		<0.01	----	----	----	----
Methylene chloride	75-09-2	0.4	mg/kg		<0.4	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.02	mg/kg		<0.02	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.01	mg/kg		<0.01	----	----	----	----
Chloroform	67-66-3	0.02	mg/kg		<0.02	----	----	----	----
1,1,1-Trichloroethane	71-55-6	0.01	mg/kg		<0.01	----	----	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg		<0.01	----	----	----	----
1,2-Dichloroethane	107-06-2	0.02	mg/kg		<0.02	----	----	----	----
Trichloroethene	79-01-6	0.02	mg/kg		<0.02	----	----	----	----
1,1,2-Trichloroethane	79-00-5	0.04	mg/kg		<0.04	----	----	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg		<0.02	----	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	0.01	mg/kg		<0.01	----	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	0.02	mg/kg		<0.02	----	----	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg		<0.02	----	----	----	----
Chlorobenzene	108-90-7	0.02	mg/kg		<0.02	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP074I: Volatile Halogenated Compounds - Continued</b>									
1,4-Dichlorobenzene	106-46-7	0.02	mg/kg		<0.02	----	----	----	----
1,2-Dichlorobenzene	95-50-1	0.02	mg/kg		<0.02	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	0.01	mg/kg		<0.01	----	----	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg		<0.01	----	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	1.2	1.2	1.2	1.2
<b>EP075A: Phenolic Compounds (Halogenated)</b>									
2-Chlorophenol	95-57-8	0.03	mg/kg		<0.03	----	----	----	----





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP075A: Phenolic Compounds (Halogenated) - Continued</b>									
2,4-Dichlorophenol	120-83-2	0.03	mg/kg		<0.03	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.03	mg/kg		<0.03	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg		<0.03	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.05	mg/kg		<0.05	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.05	mg/kg		<0.05	----	----	----	----
2,3,5,6-Tetrachlorophenol	935-95-5	0.03	mg/kg		<0.03	----	----	----	----
2,3,4,5 & 2,3,4,6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg		<0.05	----	----	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg		<0.03	----	----	----	----
<b>EP075A: Phenolic Compounds (Non-halogenated)</b>									
Phenol	108-95-2	1	mg/kg		<1	----	----	----	----
2-Methylphenol	95-48-7	1	mg/kg		<1	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg		<1	----	----	----	----
2,4-Dimethylphenol	105-67-9	1	mg/kg		<1	----	----	----	----
2,4-Dinitrophenol	51-28-5	5	mg/kg		<5	----	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg		<5	----	----	----	----
2-Methyl-4,6-dinitrophenol	8071-51-0	5	mg/kg		<5	----	----	----	----
Dinoseb	88-85-7	5	mg/kg		<5	----	----	----	----
2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	5	mg/kg		<5	----	----	----	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg		<1	----	----	----	----
<b>EP075B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005	
				Result	Result	Result	Result	Result	
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----	
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----	
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----	
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----	
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	----	----	----	----	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	----	----	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	----	----	
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.03	mg/kg	<0.03	----	----	----	----	
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	----	----	----	----	
beta-BHC	319-85-7	0.03	mg/kg	<0.03	----	----	----	----	
gamma-BHC - (Lindane)	58-89-9	0.03	mg/kg	<0.03	----	----	----	----	
delta-BHC	319-86-8	0.03	mg/kg	<0.03	----	----	----	----	
Heptachlor	76-44-8	0.03	mg/kg	<0.03	----	----	----	----	
Aldrin	309-00-2	0.03	mg/kg	<0.03	----	----	----	----	
Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	----	----	----	----	
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	----	----	----	----	
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	----	----	----	----	



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP0751: Organochlorine Pesticides - Continued</b>									
Endosulfan 1	959-98-8	0.03	mg/kg		<0.03	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.03	mg/kg		<0.03	----	----	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg		<0.03	----	----	----	----
Endrin	72-20-8	0.03	mg/kg		<0.03	----	----	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg		<0.03	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg		<0.03	----	----	----	----
4,4'-DDT	50-29-3	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.03	mg/kg		<0.03	----	----	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg		<0.03	----	----	----	----
^ Chlordane	57-74-9	0.03	mg/kg		<0.03	----	----	----	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction	----	10	mg/kg		----	<10	<10	<10	<10
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
C15 - C28 Fraction	----	100	mg/kg		120	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		250	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg		370	----	----	----	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	<10	<10	<10



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued</b>									
<sup>^</sup> C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	mg/kg		310	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		140	----	----	----	----
<sup>^</sup> >C10 - C40 Fraction (sum)	----	50	mg/kg		----	<50	<50	<50	<50
<sup>^</sup> >C10 - C40 Fraction (sum)	----	50	mg/kg		450	----	----	----	----
<sup>^</sup> >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
<sup>^</sup> Sum of BTEX	----	0.2	mg/kg		----	<0.2	<0.2	<0.2	<0.2
<sup>^</sup> Total Xylenes	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		----	<1	<1	<1	<1
<b>EP231A: Perfluoroalkyl Sulfonic Acids</b>									
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0010	mg/kg		<0.0010	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0020	mg/kg		<0.0020	----	----	----	----



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005
					Result	Result	Result	Result	Result
<b>EP231B: Perfluoroalkyl Carboxylic Acids</b>									
Perfluorooctanoic acid (PFOA)	335-67-1	0.0010	mg/kg		<0.0010	----	----	----	----
<b>EP066S: PCB Surrogate</b>									
Decachlorobiphenyl	2051-24-3	0.1	%		97.5	----	----	----	----
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		89.4	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		106	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		99.7	----	----	----	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		----	104	103	103	79.6
2-Chlorophenol-D4	93951-73-6	0.5	%		----	67.2	68.8	66.6	75.2
2,4,6-Tribromophenol	118-79-6	0.5	%		----	80.9	84.1	77.7	78.7
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		----	96.1	95.0	92.2	98.0
Anthracene-d10	1719-06-8	0.5	%		----	106	104	104	102
4-Terphenyl-d14	1718-51-0	0.5	%		----	93.7	92.9	93.6	110
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>									
Phenol-d6	13127-88-3	0.025	%		85.5	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%		88.4	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.025	%		66.9	----	----	----	----
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>									
Nitrobenzene-D5	4165-60-0	0.025	%		80.4	----	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.025	%		80.4	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%		87.0	----	----	----	----
Anthracene-d10	1719-06-8	0.025	%		88.9	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%		91.7	----	----	----	----
<b>EP080S: TPH(V)/BTX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		----	93.0	97.2	93.3	99.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH1 0.2	BH1 0.4	BH2 0.1	BH2 0.4	BH3 0.1
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507991-001	EM2507991-002	EM2507991-003	EM2507991-004	EM2507991-005	
				Result	Result	Result	Result	Result	
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.2	%	----	95.6	94.8	93.4	99.6	
4-Bromofluorobenzene	460-00-4	0.2	%	----	99.5	98.6	102	107	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	91.2	----	----	----	----	
13C8-PFOA	----	0.0002	%	109	----	----	----	----	





## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH3 0.4	BH4 0.2	BH4 0.5	BH5 0.2	BH5 0.5
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-006	EM2507991-007	EM2507991-008	EM2507991-009	EM2507991-010
					Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		10.5	3.8	8.8	2.8	15.1
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		35	3	36	10	42
Copper	7440-50-8	5	mg/kg		11	<5	10	<5	13
Lead	7439-92-1	5	mg/kg		14	<5	12	<5	14
Nickel	7440-02-0	2	mg/kg		26	3	24	8	32
Zinc	7440-66-6	5	mg/kg		28	16	19	12	31
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH3 0.4	BH4 0.2	BH4 0.5	BH5 0.2	BH5 0.5
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-006	EM2507991-007	EM2507991-008	EM2507991-009	EM2507991-010
					Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
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
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
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	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
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



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH3 0.4	BH4 0.2	BH4 0.5	BH5 0.2	BH5 0.5
Sampling date / time					09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00	09-May-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507991-006	EM2507991-007	EM2507991-008	EM2507991-009	EM2507991-010
					Result	Result	Result	Result	Result
<b>EP080: BTEXN - Continued</b>									
<sup>A</sup> 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
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		107	105	104	106	106
2-Chlorophenol-D4	93951-73-6	0.5	%		68.4	66.8	66.6	68.5	67.6
2,4,6-Tribromophenol	118-79-6	0.5	%		81.4	82.8	78.0	82.2	79.5
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		97.6	96.1	96.3	97.4	99.4
Anthracene-d10	1719-06-8	0.5	%		108	103	106	105	109
4-Terphenyl-d14	1718-51-0	0.5	%		97.6	96.7	97.1	96.0	98.7
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		93.0	96.3	91.0	97.2	96.9
Toluene-D8	2037-26-5	0.2	%		97.0	95.4	92.3	95.7	98.4
4-Bromofluorobenzene	460-00-4	0.2	%		100	102	99.0	97.8	99.2

Page : 15 of 16  
 Work Order : EM2507991  
 Client : GEOTESTA  
 Project : EP0689



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Sample ID

				DUP	----	----	----	----
Sampling date / time				09-May-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2507991-011	-----	-----	-----	-----
Result				----	----	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	----	1.0	%	14.4	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
Arsenic	7440-38-2	5	mg/kg	18	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	32	----	----	----	----
Copper	7440-50-8	5	mg/kg	25	----	----	----	----
Lead	7439-92-1	5	mg/kg	5	----	----	----	----
Nickel	7440-02-0	2	mg/kg	36	----	----	----	----
Zinc	7440-66-6	5	mg/kg	58	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----



## Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP066S: PCB Surrogate</b>			
Decachlorobiphenyl	2051-24-3	41	122
<b>EP074S: VOC Surrogates (Ultra-Trace)</b>			
1,2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
<b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>			
Phenol-d6	13127-88-3	63	134
2-Chlorophenol-D4	93951-73-6	60	125
2,4,6-Tribromophenol	118-79-6	54	129
<b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b>			
Nitrobenzene-D5	4165-60-0	63	131
1,2-Dichlorobenzene-D4	2199-69-1	61	124
2-Fluorobiphenyl	321-60-8	69	131
Anthracene-d10	1719-06-8	70	133
4-Terphenyl-d14	1718-51-0	59	141
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
<b>EP231S: PFAS Surrogate</b>			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

EM24GEOTES0001 - VIC Custom Quote

CHAIN OF CUSTODY

Job No. EP0689  
 Project Title Emmaus Catholic Primary School  
 Sampled By: DY  
 Request By: DY  
 Request Date: 09/05/25  
 Client Code: GEOTES

GEOTESTA PTY LTD  
 LEVEL 1, 7 BUSINESS PARK DRIVE  
 NOTTING HILL, VIC 3168  
 Tel: 03 9562 8808  
 Fax: 03 9562 9098

Please email results to [enviro@geotesta.com.au](mailto:enviro@geotesta.com.au)



Environmental Division  
 Melbourne  
 Work Order Reference  
**EM2507991**

Re

Telephone : + 61-3-9549 9800



Analysis																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
No.	Sample Date	Sample No.	Sample Depth (m)	Sample Type	No. of Containers/ bags	Turnaround Time	P-32/4	S-26	S-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Received by:

*man Amy*

Laboratory:

ALS

Date:

*9/5*

Time:

*1005*



**ATTACHMENT 3**  
**95% UCL<sub>AVERAGE</sub> CALCULATIONS**

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.2 16/05/25 2:51:12 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Nickel											
12												
13	General Statistics											
14	Total Number of Observations				10		Number of Distinct Observations				10	
15							Number of Missing Observations				0	
16	Minimum				3		Mean				38	
17	Maximum				99		Median				29.5	
18	SD				31.41		Std. Error of Mean				9.933	
19	Coefficient of Variation				0.827		Skewness				1.237	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.831		Shapiro Wilk GOF Test					
23	1% Shapiro Wilk Critical Value				0.781		Data appear Normal at 1% Significance Level					
24	Lilliefors Test Statistic				0.276		Lilliefors GOF Test					
25	1% Lilliefors Critical Value				0.304		Data appear Normal at 1% Significance Level					
26	Data appear Normal at 1% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				56.21		95% Adjusted-CLT UCL (Chen-1995)				58.49	
31							95% Modified-t UCL (Johnson-1978)				56.86	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.426		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.74		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.208		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.271		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				1.48		k star (bias corrected MLE)				1.103	
42	Theta hat (MLE)				25.67		Theta star (bias corrected MLE)				34.46	
43	nu hat (MLE)				29.6		nu star (bias corrected)				22.06	
44	MLE Mean (bias corrected)				38		MLE Sd (bias corrected)				36.19	
45							Approximate Chi Square Value (0.05)				12.38	
46	Adjusted Level of Significance				0.0267		Adjusted Chi Square Value				11.14	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL				67.7		95% Adjusted Gamma UCL				75.24	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.898		Shapiro Wilk Lognormal GOF Test					
53	10% Shapiro Wilk Critical Value				0.869		Data appear Lognormal at 10% Significance Level					
54	Lilliefors Test Statistic				0.267		Lilliefors Lognormal GOF Test					
55	10% Lilliefors Critical Value				0.241		Data Not Lognormal at 10% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
56	Data appear Approximate Lognormal at 10% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				1.099	Mean of logged Data				3.263		
60	Maximum of Logged Data				4.595	SD of logged Data				1.034		
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				133.1	90% Chebyshev (MVUE) UCL				84.19		
64	95% Chebyshev (MVUE) UCL				103.5	97.5% Chebyshev (MVUE) UCL				130.4		
65	99% Chebyshev (MVUE) UCL				183.1							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				54.34	95% BCA Bootstrap UCL				56.5		
72	95% Standard Bootstrap UCL				53.62	95% Bootstrap-t UCL				74.58		
73	95% Hall's Bootstrap UCL				184	95% Percentile Bootstrap UCL				54.6		
74	90% Chebyshev(Mean, Sd) UCL				67.8	95% Chebyshev(Mean, Sd) UCL				81.3		
75	97.5% Chebyshev(Mean, Sd) UCL				100	99% Chebyshev(Mean, Sd) UCL				136.8		
76												
77	Suggested UCL to Use											
78	95% Student's-t UCL				56.21							
79												
80	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
81	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
82	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
83												