Appendix I – Preliminary Soil Contamination Assessment by AS James



PRELIMINARY SOIL CONTAMINATION ASSESSMENT

FORMER WOODLEIGH, GLEN FORBES, KERNOT AND WOOLAMAI TRAIN STATIONS - WOOLAMAI TO NYORA RAIL TRAIL

REPORT NO: 123072/E1/Rev2

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EXECUTIVE SUMMARY

A.S.James (ASJ) was commissioned by Michael Smith and Associates (the client) to undertake a Preliminary Soil Contamination Assessment (PSCA) of four separate sites located along the proposed Woolamai to Nyora Rail Trail to inform a feasibility study. The sites of interest for preliminary assessment include former train stations at Woodleigh, Glen Forbes, Kernot and Woolamai. All train station related buildings and infrastructure appear to have been demolished and removed from the sites. The land at each of the four sites are currently Crown land, zoned for Public Park and Recreation, and are being used for grazing purposes.

The client has requested preliminary soil sampling and analysis to allow for review of the environmental quality of the underlying soils to inform the feasibility study and provide information prior to construction activities. The PSCA consisted of limited sampling and analysis to determine the in-situ soils environmental quality in accordance with the guidelines given in the National Environment Protection Measure Council, 2013 "*National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*" (NEPM 2013), as well as EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds*.

The scope of works for the site was limited to the following:

- Undertake drilling at twenty-two (22) client determined borehole locations at the former Woolamai (7 boreholes), Glen Forbes (5 boreholes), Kernot (5 boreholes) and Woodleigh (5 boreholes) train station sites, to allow for preliminary review of environmental soil quality.
- Analysis of soils samples for suspected potential contaminants of concern, primarily Heavy Metals, Total Petroleum Hydrocarbons, Total Polyaromatic Hydrocarbons, Organochlorine Pesticides, PFAS, Asbestos and pH.
- Evaluation of field and laboratory data including the evaluation of quality control methods adopted by the analytical laboratories.
- Preparation of a formal report which provides an appraisal of both the significance and implications of any contaminants encountered, together with recommendations for further site investigation or clean-up work as considered necessary in relation to the proposed development of the site. A classification of the insitu soils for EPA Victoria Waste Soil Classification will also be provided.

Site inspection of each of the four sites was undertaken, the inspections indicated the following:

Woolamai - The site inspection indicated the presence of stockpiles of soil including construction debris and rubble on the site. The client has indicated that local sources indicated the construction debris / rubble originated from construction works undertaken at the Woolamai racecourse.

Former railway platform and concrete slabs were also encountered during inspection. The site also contained two dams and a large number of round bales. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. The land is currently being used for agricultural grazing purposes.

Glen Forbes - The site inspection indicated the presence of multiple stockpiles of soil, construction debris and bricks located east of Borehole 8. Two steel containers and wooden pallets were also encountered. A dam was present in the north-east of the site immediately south of Borehole 12. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. The land is currently being used for agricultural grazing purposes.

Kernot - The majority of the former railway station site at Kernot is now heavily vegetated with trees and bushes etc. Remnants of the former railway platform was observed during investigation. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. A dam was present south-west of Borehole 14. The land is currently being used for agricultural grazing purposes.

Woodleigh - The site inspection indicated the presence of the former railway platforms, or remnants thereof. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. A dam was present north-west of Borehole 21. The land is currently being used for agricultural grazing purposes.

No evidence of ACM was present on the surface of these sites (*inspection inhibited due to presence of heavy vegetation*) or stockpiles of soil, nor within the drill cuttings during intrusive investigation. No evidence of underground or aboveground fuel tanks or associated infrastructure was encountered during reconnaissance, refer to Appendix B for site photographs and Figures 1-4 of Appendix A for site maps.

Site Geology

The intrusive investigation and site inspection at each site has indicated the sites to generally contain a fill soil material layer underlain by natural soils. The fill soils were similar in geology to the natural soils, indicating they were likely native to the site as opposed to being imported onto site, refer to Table 1 of this report for summary of geology encountered.

Analytical Results

The analytical results for soil samples analysed were tabulated and screened against the adopted criteria for all contaminants tested. The tabulated results can be viewed in Appendix D, and for those contaminants that have exceeded the adopted criteria for the site these are tabulated in Tables 12-16 of this report. The following summarises the soil sample results for each site with respect to the environmental values for the site's land use, preliminary EPA Victoria Waste Soil Classification Assessment and PFAS National Environmental Management Plan (2020).

Woolamai - An exceedance of the adopted NEPM HILs C criteria (*considered protective of human health in a Recreation / Open Space land use setting*) was reported for Benzo(a)pyrene TEQ. Therefore, this environmental value has been precluded at this stage. Further sampling and analysis of the site soils will be required.

No exceedances of the adopted NEPM HILs D criteria (considered protective of construction worker health) were reported. Therefore, this environmental value has not been precluded at this stage.

Exceedance of the adopted NEPM EIL and ESL criteria (considered protective of terrestrial ecosystems) were reported for Arsenic, Total Recoverable Hydrocarbons F3 and Benzo(a)pyrene. Therefore, this environmental value has been precluded at this stage.

No exceedances of the adopted PFAS NEMP (2020) criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

Exceedances of the EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* Fill Material criteria were reported for Arsenic and Benzo(a)pyrene. Based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic and Benzo(a)pyrene contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic and Benzo(a)pyrene.

Further sampling in accordance with EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline may be required for the site soils depending on the volume of soils proposed to be removed offsite.

Statistical analysis of the contaminant datasets at each of the sites could not be undertaken due to lack of sampling density, therefore, further sampling and analysis is recommended.

Glen Forbes - No exceedances of the adopted NEPM HILs C criteria were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

No exceedances of the adopted NEPM HILs D were reported. Therefore, this environmental value has not been precluded at this stage.

An exceedance of the adopted NEPM EIL and ESL criteria was reported for Arsenic. Therefore, this environmental value has been precluded at this stage.

The soil samples reported generally slight to no visual evidence of contamination and no olfactory signs of contamination, with exception to Borehole 9 which reported visual evidence of contamination (brick fragments, coal fragments, ballast etc.).

The aesthetics of the site soils were considered generally not to be offensive to human senses in a Recreation / Open Space land use setting, with exception to soils present in the vicinity of Borehole 9.

No exceedances of the adopted PFAS NEMP (2020) criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

Exceedances of the EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* Fill Material criteria were reported for Arsenic. Based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic.

Statistical analysis of the Arsenic dataset could not be undertaken due to lack of sampling density, therefore, further sampling and analysis is recommended.

Kernot - No exceedances of the adopted NEPM HILs C criteria were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

No exceedances of the adopted NEPM HILs D were reported. Therefore, this environmental value has not been precluded at this stage.

Exceedance of the adopted NEPM EIL and ESL criteria were reported for Arsenic. Therefore, this environmental value has been precluded at this stage.

One exceedance of the adopted PFAS NEMP (2020) Interim Soil Ecological Indirect (all land uses) criteria was reported for Sum of PFOS + PFHxS in Borehole 16. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Direct Exposure criteria and Human Health Screening Value for Soil criteria. Statistical analysis of the Sum of PFOS + PFHxS dataset could not be undertaken due to lack of sampling density. ASLP leachability for acidic and neutral conditions was also not undertaken. Therefore, this adopted criterion has been precluded at this stage. Further sampling and analysis of the site soils will be required to determine the spatial spread of PFAS contamination at the site.

Exceedances of the EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* Fill Material criteria were reported for Arsenic, PFOS and PFHxS. Statistical analysis of the Arsenic, PFOS and PFHxS datasets could not be undertaken due to lack of sampling density. Therefore, based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic, PFOS and PFHxS contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic and Sum of PFOS and PFHxS.

Further intrusive investigation of the site soils at this site will be required, to confirm the presence of PFOS and PFHxS contamination in Borehole 16, delineate its extents and carry out necessary testing to determine the potential for reuse of soil in accordance with Figure 5 of the PFAS NEMP 2020 guideline.

Woodleigh - No exceedances of the adopted NEPM HILs C criteria were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

No exceedances of the adopted NEPM HILs D were reported. Therefore, this environmental value has not been precluded at this stage.

No exceedances of the adopted NEPM EIL and ESL criteria were reported. Therefore, this environmental value has not been precluded at this stage.

No exceedances of the adopted PFAS NEMP (2020) criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

No exceedances of the EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* Fill Material criteria were reported. Therefore, the site soils are preliminarily classified as Fill Material (*Industrial Waste - Waste Code N122*)

Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*.

Data Gaps and Issues of Concern

Further sampling in accordance with EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline may be required for the site soils depending on the volume of soils proposed to be removed offsite.

Statistical analysis of the contaminant datasets at each of the sites could not be undertaken due to lack of sampling density, therefore, further sampling and analysis is recommended.

ASLP leachability testing for contaminants exceeding the Fill Material criteria at each of the sites will be required.

Further intrusive investigation of the site soils at the Glen Forbes site, to delineate the presence of visual contamination in Borehole 9 and determine its extents, is recommended. This is recommended, so as to prevent potential receptor contact with these aesthetically unpleasing soils at final development stage.

Further intrusive investigation of the site soils at the Kernot site, to confirm the presence of PFOS and PFHxS contamination in Borehole 16, delineate its extents and carry out necessary testing to determine the potential for reuse of soil in accordance with Figure 5 of the PFAS NEMP 2020 guideline.

Review of Planning Practice Note 30 (PPN 30), indicates that a Preliminary Site Investigation (PSI) will be required for each site, including a site history assessment. Railway yards / train stations are listed in Table 2 of PPN 30 as high potential for contamination. The risk matrix presented in Table 3 of PPN 30 shows that due to the recreation / open space land use proposed for the sites and the high potential for contamination

(railway yards / train stations), a PSI would be required to inform the potential need for preliminary risk screen assessment or environmental audit.

Mitigation measures to effectively deal with the type of contamination reported on the sites include excavation and removal of contaminated soil offsite or installation of permanent barrier to prevent receptor contact with contamination. However, further sampling and analysis are recommended prior to this.

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1. BACKGROUND

A.S.James (ASJ) was commissioned by Michael Smith and Associates (*the client*) to undertake a Preliminary Soil Contamination Assessment (PSCA) of four separate sites located along the proposed Woolamai to Nyora Rail Trail to inform a feasibility study. The sites of interest for preliminary assessment include former train stations at Woodleigh, Glen Forbes, Kernot and Woolamai. All train station related buildings and infrastructure appear to have been demolished and removed from the sites. The land at each of the four sites are currently Crown land, zoned for Public Park and Recreation, and are being used for grazing purposes, refer to Figures 1-4 of Appendix A for client determined borehole test locations.

The client has requested preliminary soil sampling and analysis to allow for review of the environmental quality of the underlying soils to inform the feasibility study and provide information prior to construction activities. The PSCA consisted of limited sampling and analysis to determine the in-situ soils environmental quality in accordance with the guidelines given in the National Environment Protection Measure Council, 2013 "*National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*" (NEPM 2013), as well as EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds*.

2. SCOPE OF WORKS

- Undertake drilling at twenty-two (22) client determined borehole locations at the former Woolamai (7 boreholes), Glen Forbes (5 boreholes), Kernot (5 boreholes) and Woodleigh (5 boreholes) train station sites, to allow for preliminary review of environmental soil quality.
- Analysis of soils samples for suspected potential contaminants of concern, primarily Heavy Metals, Total Petroleum Hydrocarbons, Total Polyaromatic Hydrocarbons, Organochlorine Pesticides, PFAS, Asbestos and pH.
- Evaluation of field and laboratory data including the evaluation of quality control methods adopted by the analytical laboratories.
- Preparation of a formal report which provides an appraisal of both the significance and implications of any contaminants encountered, together with recommendations for further site investigation or clean-up work as considered necessary in relation to the proposed development of the site. A classification of the insitu soils for EPA Victoria Waste Soil Classification will also be provided.

3. SITE INSPECTION

Woolamai - The site inspection indicated the presence of stockpiles of soil including construction debris and rubble on the site. The client has indicated that local sources indicated the construction debris / rubble originated from construction works undertaken at the Woolamai racecourse.

Former railway platform and concrete slabs were also encountered during inspection. The site also contained two dams and a large number of round bales. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. The land is currently being used for agricultural grazing purposes.

Glen Forbes - The site inspection indicated the presence of multiple stockpiles of soil, construction debris and bricks located east of Borehole 8. Two steel containers and wooden pallets were also encountered. A dam was present in the north-east of the site immediately south of Borehole 12. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. The land is currently being used for agricultural grazing purposes.

Kernot - The majority of the former railway station site at Kernot is now heavily vegetated with trees and bushes etc. Remnants of the former railway platform was observed during investigation. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. A dam was present south-west of Borehole 14. The land is currently being used for agricultural grazing purposes.

Woodleigh - The site inspection indicated the presence of the former railway platforms, or remnants thereof. The presence of dense vegetation inhibited inspection of the surface of the site. No buildings or infrastructure were present on the site. A dam was present north-west of Borehole 21. The land is currently being used for agricultural grazing purposes.

No evidence of ACM was present on the surface of these sites (*inspection inhibited due to presence of heavy vegetation*) or stockpiles of soil, nor within the drill cuttings during intrusive investigation. No evidence of underground or aboveground fuel tanks or associated infrastructure was encountered during reconnaissance, refer to Appendix B for site photographs and Figures 1-4 of Appendix A for site maps.

4. SOIL SAMPLING RATIONALE

To determine the environmental quality of the in-situ soils underlying the site, twenty-two (22) bore test locations were established on the sites at client determined locations (Woolamai (seven (7) bores), Glen Forbes (five (5) bores), Kernot (five bores) and Woodleigh (five (5) bores)).

A total of sixty-four (64) soil samples were retrieved from the site soils in this investigation. The number of soil samples analysed and contaminants of concern analysed for are outlined in Table 2 of this report.

The soil samples were analysed for the purposes of assessing the human health risk to construction workers and future site users, along with a preliminary categorisation of the soils for offsite disposal and suitability for reuse onsite should the opportunity allow. Intrusive investigative soil sampling from boreholes drilled across the site were proposed to provide information regarding the underlying soils environmental quality in line with National Environment Protection (Assessment of Site Contamination) Measure Amendment 2013 (NEPM 2013) guidelines.

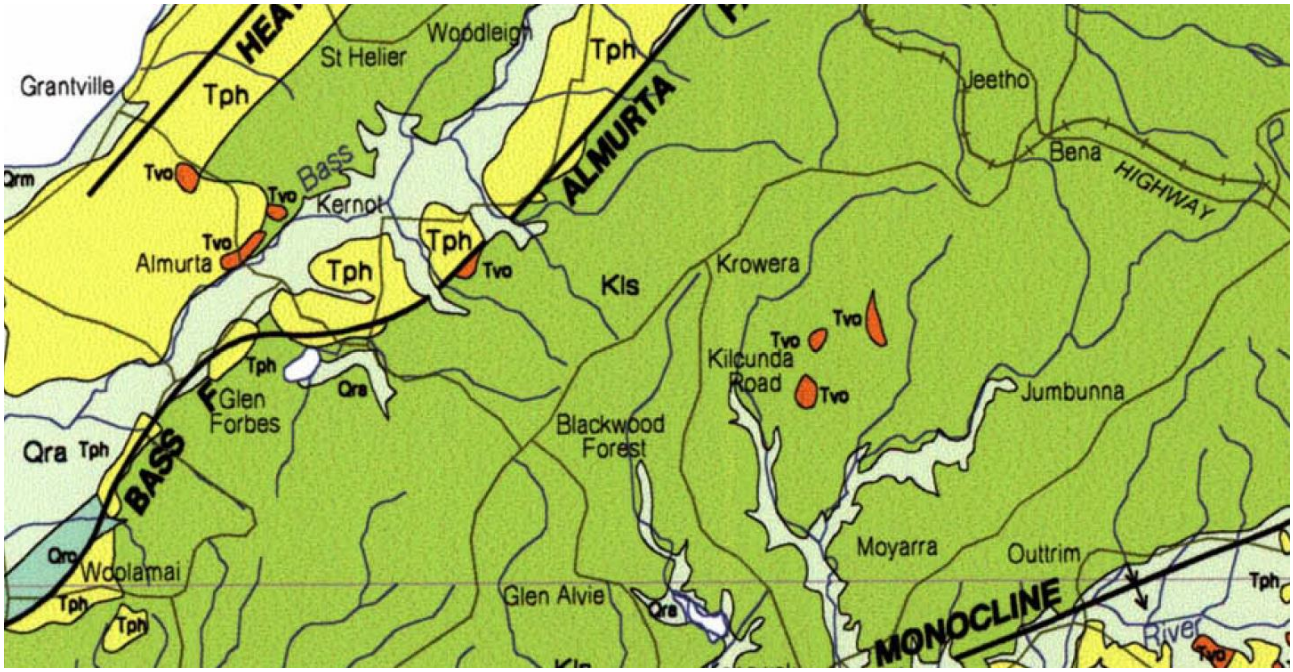
All soil samples were retrieved from the SPT sampler, using disposable nitrile gloves.

5. REGIONAL GEOLOGY

The Geological Survey of Victoria, 1:250,000 Series, Warragul Sheet, and GeoVic, indicates each of the four (4) sites to be underlain by Quaternary mostly Holocene Fluvial deposits (Woolamai (Qrc), Glen Forbes (Qra), Kernot (Qra) and Woodleigh (Qra)). The geological map indicates Qra Fluvial to comprise of alluvium, gravel, sand and silt, and Qrc Fluvial to comprise of gully alluvium, colluvium: gravel, sand and silt.

The GeoVic atlas provided by the Dept. of Primary Industries Victoria also indicates a similar geological formation underlying the site. The regional geology is depicted below.

Figure 1: Retrieved from Geological Survey of Victoria – Warragul Sheet



Approximate Site Boundary

Qra – Fluvial comprising of alluvium, gravel, sand and silt

Qrc – Fluvial comprising of gully alluvium, colluvium: gravel, sand and silt

6. SITE SPECIFIC GEOLOGY

The intrusive investigation and site inspection at each site has indicated the sites to generally contain a fill soil material layer underlain by natural soils. The fill soils were similar in geology to the natural soils, indicating they were likely native to the site as opposed to being imported onto site. The general geological profile of the site is summarised in the table below. No potential asbestos containing materials were observed in any of the boreholes, refer to Appendix A for borelogs.

Table 1: Summary of Geology Underlying Each Site

Approximate Depths (from/to) (mbgl)	Soil Type	Description of underlying lithology
Woolamai		
0.0-0.5	Fill Soil Material	Dark grey, clayey silt, gravel and root zone present, moist, medium dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.2-0.8	Silt (ML)	Dark grey, clayey, root zone present, dry, dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.3-1.0	Clay (CL)	Grey-brown, silty with sand, root zone present, moist, firm, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
Glen Forbes		
0.0-1.5	Fill Soil Material	Dark grey-dark brown, clayey silt and silty clay, root zone present, brick fragments, ballast, coal fragments present in Bores 8 and 9, moist, medium dense, no hydrocarbon odour or

Approximate Depths (from/to) (mbgl)	Soil Type	Description of underlying lithology
		staining encountered, no asbestos containing material observed.
0.2-1.2	Silt (ML)	Dark grey-grey, clayey, root zone present, moist, dense-medium dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.5-1.5	Clay (CL)	Light grey-grey-brown, silty, moist, firm, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
Kernot		
0.0-0.4	Fill Soil Material	Dark grey, clayey silt and clayey silty sand, gravel and root zone present, moist, medium dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.0-0.5	Silt (ML)	Dark grey-grey, clay with peat, root zone present, moist, medium dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.3-1.0	Clay (CL)	Light grey-brown-grey, silty, root zone present, moist, stiff, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
Woodleigh		
0.0-0.3	Fill Soil Material	Dark grey, clayey silt, gravel, ballast and root zone present, moist, medium dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.1-0.3	Silt (ML)	Dark grey, clayey, root zone present, moist, dense, no hydrocarbon odour or staining encountered, no asbestos containing material observed.
0.1-1.0	Clay (CL)	Light grey-brown-grey, silty with peat, root zone present, moist, stiff, no hydrocarbon odour or staining encountered, no asbestos containing material observed.

7. METHODOLOGY

A total of sixty-four (64) soil samples were retrieved from the in-situ soils via twenty-two (22) bore test locations, with twenty-six (26) soil samples (Woolamai (8), Glen Forbes (6), Kernot (5) and Woodleigh (7)) retrieved and analysed for potential contaminants of concern.

The railway line from Woolamai to Nyora carried coal from the Kilcunda coalfields to its final destination of Melbourne. The most likely contaminants of concern will be associated with the contamination from cartage of coal and associated by-products, plus other generally anticipated contaminants found in railway land.

The sampling densities were not in strict accordance with EPA Victoria Publication 702.2 *Soil sampling for waste soils* guideline or NSW EPA Contaminated Land Guidelines - *Sampling design part 1 – application*, however, the sampling densities were considered suitable for preliminary investigation purposes. Refer to Figure 1-4 of Appendix A for individual soil sampling locations for each site. All in-situ soil samples were retrieved from a SPT sampler using disposable nitrile gloves.

After completion of fieldwork, the soil samples were transported to the primary and secondary laboratories. The primary laboratory used by A.S.James to conduct testing of the soil samples retrieved from this site was ALS (Environmental Division), a laboratory accredited by the National Association of Testing Authorities, Australia (NATA). The duplicate soil sample(s) were sent to Eurofins (Secondary Laboratory), also a laboratory accredited by the National Association of Testing Authorities, Australia (NATA). The table below indicates the number of soil samples tested and analytical suite utilised based on primary contaminants of concern.

Table 2: Number of Soil Samples Tested and Analytical Suites Used

Soil Sample Location	No. of Soil Samples Retrieved	No. of Soil Samples Tested	Analytical Suite
Woolamai			
Fill Soil Material	10	3	EPA Victorian 1828.3 Table 3 Screen
		3	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		2	PFAS (Per- and polyfluoroalkyl substances)
		5	Asbestos
Natural Soils	14	1	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		1	Chloride, Sulfate, OOC and CEC
Glen Forbes			
Fill Soil Material	9	2	EPA Victorian 1828.3 Table 3 Screen
		4	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		4	PFAS (Per- and polyfluoroalkyl substances)
		4	Asbestos
		1	Chloride, Sulfate, OOC and CEC
Natural Soils	8	8	On Hold
Kernot			
Fill Soil Material	2	2	EPA Victorian 1828.3 Table 3 Screen
		2	PFAS (Per- and polyfluoroalkyl substances)
		1	Asbestos
		1	Chloride, Sulfate, OOC and CEC
Natural Soils	9	3	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		2	PFAS (Per- and polyfluoroalkyl substances)
		3	Asbestos
		1	Chloride, Sulfate, OOC and CEC

Soil Sample Location	No. of Soil Samples Retrieved	No. of Soil Samples Tested	Analytical Suite
Woodleigh			
Fill Soil Material	5	4	EPA Victorian 1828.3 Table 3 Screen
		1	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		4	PFAS (Per- and polyfluoroalkyl substances)
		4	Asbestos
		1	Chloride, Sulfate, OOC and CEC
Natural Soils	10	2	Heavy Metals, Polyaromatic Hydrocarbons, Petroleum Hydrocarbons, Organochlorine Pesticides and pH
		1	Chloride, Sulfate, OOC and CEC

8. DATA QUALITY OBJECTIVES

8.1 DATA QUALITY OBJECTIVES

The Data Quality Objectives (DQOs) for this site investigation have been developed in accordance with the NSW EPA Contaminated Land Guidelines - *Sampling design part 1 – application* and EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline. The following outlines the DQO process for this investigation.

8.1.1 State the Problem

Michael Smith and Associates commissioned A.S.James Pty Ltd to complete the following:

a) Complete a Preliminary Soil Contamination Assessment of four (4) former train station sites located on the proposed Woolamai to Nyora Rail Trail, refer to Figures 1-4 of Appendix A. This investigation included the assessment of the contamination status of the soils underlying the site at twenty-two client determined borehole test locations at the former Woolamai (7 boreholes), Glen Forbes (5 boreholes), Kernot (5 boreholes) and Woodleigh (5 boreholes) train station sites, refer Figures 1-4 of Appendix A.

b) The investigation shall conform to the adopted guidelines stated in the National Environment Protection (Assessment of Site Contamination) Measure Amendment 2013 (NEPM 2013), relevant EPA Victoria Environment Protection Regulations, Environmental Reference Standards and Publications.

c) Determine if the site's environmental quality is suitable for its ongoing Recreation / Open Space land use (*Recreation / Open Space land use as per NEPM 2013 definition of Health Investigation Levels*).

d) Determine the insitu soils preliminary EPA Victoria waste soil classification should surplus soils be proposed to be disposed of offsite.

e) Budget constraints will also apply, as this is assessment is limited in its scope, the budget must be adhered to and should further assessment be required the further works necessary will be outlined.

8.1.2 Identify the Decision

The main objective of the assessment is to determine whether the contaminant concentrations in the underlying soils exceed the adopted NEPM Ecological Investigation Levels (EILs) and NEPM Health Investigation Levels (HILs) C environmental value criteria considered protective of human health in a Recreation / Open Space setting.

Determine the insitu soils EPA Victoria Waste Soil Classification given the likely offsite disposal of site topsoils and vegetation during future construction works. An evaluation of the contamination status of the site shall be undertaken based on the soil sample concentrations for contaminants of concern.

8.1.3 Identify the Inputs into the Decision

The following inputs were considered as part of the DQO process.

a) Advancement of twenty-two (22) soil sampling bore test locations at client determined locations, advanced to natural soils.

b) Site walkover survey and site features noted.

c) Laboratory results and action level for each contaminant of concern analysed.

d) Confirmation that the dataset generated by sample analysis is of an acceptable quality to allow for reliable comparison to adopted assessment criteria by assessment of quality assurance and control (Qa/Qc) as per data quality indicators established in **specify tolerable limits on decision errors** section.

Soil sampling depths considered adequate to assess the vertical profile of the soils were retrieved. Quality Assurance and Quality Control procedures implemented will be in accordance with those stated in NEPM ASC 1999 (as amended in 2013) Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils.

8.1.4 Define the Boundaries of the Study Area

The investigation areas are located at the former Woolamai (7 boreholes), Glen Forbes (5 boreholes), Kernot (5 boreholes) and Woodleigh (5 boreholes) train station sites, refer Figures 1-4 of Appendix A

The maximum vertical extent of the site investigation was 1.0mbgl, being the deepest soil sample analysed. The lateral extents of the intrusive investigation are considered to be within the confines of the boreholes drilled.

Due to the project objectives, seasonality was not assessed as part of this investigation. Data was therefore representative of the timing and duration of the current investigation.

8.1.5 Develop a Decision Rule

Evaluation of the analytical laboratory results for soil samples retrieved shall be screened against the adopted NEPM 2013 HILs Tier 1 criteria considered protective of all environmental values of land.

The decision rules adopted to answer the decisions identified in **identify the decision** section are summarised in the table below.

Table 3: Summary of Decision Rules

Decision(s) Required to be Made	Decision Rule
Are there any significant contamination risks identified at the Site with respect to the proposed development of the Site?	Analytical data for representative soil samples of identified soil media of potential concern were compared against adopted NEPM 2013 HILs C criteria thresholds. If one or more concentrations of contaminants at one or more sampling locations were reported above the adopted NEPM 2013 HILs C criteria, the answer is Yes subject to consideration below. If concentrations of contaminants were reported below the adopted NEPM 2013 HILs C criteria, the answer is No. ***Use of statistical methods:***

Decision(s) Required to be Made	Decision Rule
	For the characterisation of sample sets, statistical analysis of the data can be undertaken as appropriate and in accordance with relevant guidance documents, to facilitate the decisions. The following statistical criteria was adopted with respect to soils: Either the reported contaminant concentrations were all below the Site criteria, or the average Site concentration for each analyte was below the adopted Site criterion, no single analyte concentration exceeded 250% of the adopted Site criterion, and the standard deviation of the results was less than 50% of the Site criterion. If the resulting 95% upper confidence limit (UCL) of the average concentration for each analyte was below the adopted Site criterion, the answer to the decision is No. If the statistical criteria were not satisfied, the answer to the decision is Yes.
Determine the EPA Victoria Waste Classification of the insitu soils.	EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline has been adopted to aid classification of the insitu soils. Compare concentrations of contaminants with Table 2 and 3 criteria of EPA Victoria Publication 1828.3.
Is there any evidence of, or potential for, migration of contaminants off-site?	A qualitative assessment of contaminant sources, migration pathways and receptors was completed during this assessment of available investigation data. Where the assessment identified the potential for unacceptable risk to off-site receptors as a result of Site contamination conditions, the answer to the decision is Yes. Otherwise the answer to the decision is No.

8.1.6 Specify Tolerable Limits on Decision Errors

This step is to establish the decision maker's tolerable limits on decision errors, which are used to establish performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

Specific limits for this project have been adopted from the EPA Victoria and ASC NEPM (2013) guidelines, and modified to meet the project objectives.

Given the nature of the assessment, quality control samples were limited to three soil duplicate sample.

To assess the usability of the data prior to making decisions, the data will be assessed against predetermined Data Quality Indicators (DQIs). The pre-determined DQIs established for the project are discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters), and are shown in the Table below.

- **Precision** - measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** - measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this study is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.

- **Representativeness** – expresses the degree which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** - expresses the confidence with which one dataset can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples; ensuring analysing laboratories use consistent analysis techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted site assessment criteria.

Table 4: Summary of Quality Assurance and Quality Control Programme

Data Quality Indicator	Frequency	Data Quality Criteria
Precision		
Blind duplicates (intra laboratory) (soil only for PAHs)	3 sample(s) for soil only	<50% Relative Percent Difference
Blind duplicates (inter laboratory) (soil only for PAHs)	3 sample(s) for soil only	<50% Relative Percent Difference
Laboratory duplicates (soil only)	1 / 20 samples	<50% Relative Percent Difference
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	-	-
Samples extracted and analysed within holding times.	-	Soil organics (7-14 days), inorganics (6 months) Water TPH/PAHs 7 days to extraction, VOCs/ vTPH – 14 days, 6 months for metals Carbon tubes (28 days)
Laboratory blank	1 per sampling batch	<LOR
Rinsate blank (Heavy metals – sampled from reusable sampling equipment)	N/A	<LOR
Comparability		
Standard operating procedures for sample collection and handling	All samples	All samples

Data Quality Indicator	Frequency	Data Quality Criteria
Standard analytical methods used for all analyses	All samples	All samples
Consistent field conditions, sampling staff and laboratory analysis	All samples	All samples
Limits of reporting appropriate and consistent	All samples	All samples
Completeness		
Sample description and chain of custody completed and appropriate	All samples	All samples
Appropriate documentation	All samples	All samples
Satisfactory frequency and result for QC samples	All QA/QC samples	-
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted Site assessment criteria	All Samples	LOR<= Site assessment criteria

If any of the DQIs are not met, further assessment will be necessary to determine whether the non-conformance will significantly affect the usefulness of the data. Corrective actions may include requesting further information from samplers and / or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data.

8.1.7 Optimise the Design for Obtaining Data

Additional sampling shall be undertaken where data gaps exist or where it is deemed necessary, i.e. contamination encountered or known high potential for contamination areas could not be sampled etc., in order to adequately characterise the environmental site conditions. Targeted sampling to be focused on potential areas of contamination on the site. Resource effective design that is expected to achieve stated DQOs. Quality Assurance (QA) procedures to be followed in line with NEPM ASC 1999 (as amended in 2013) Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils and NSW EPA Contaminated Land Guidelines - *Sampling design part 1 – application*, with appropriate Quality Control (QC) samples retrieved.

8.1.8 Analysis of Results and Assigning a Waste Category

Following comparison of reported analytical concentration results against waste categorisation thresholds in EPA Publication 1828.3, statistical analysis and evaluation of data quality, a waste category can be assigned to a classification domain. This will result in the waste soil being categorised as either:

- Fill Material (Waste Code (N122)
- Soil containing asbestos only (N120)
- Category D (Waste Code N120)
- Category C (Waste Code N120)
- Category B (Waste Code N120)
- Category A (Waste Code N120)
- PFAS impacted should reported concentrations not meet EPA Publication 1828.3 and EPA Designation - *Classification of PFAS-impacted soil* criteria (Waste Code M270)

8.2 ADOPTED ONSITE USE GUIDELINES AND ASSESSMENT CRITERIA

8.2.1 Environmental Values of Land

The Environment Protection Act 2017 as amended by the Environment Protection Amendment Act 2018 (the new Act) changes Victoria's focus for environment protection and human health to a prevention-based approach, underpinned by the general environmental duty (GED). The GED requires all Victorians, including businesses and individuals, conducting activities that pose a risk to human health or the environment from pollution or waste to understand those risks and take reasonably practicable steps to eliminate or minimise them.

Subordinate legislation is the group of tools that support the Environment Protection Act 2017 (the Act). These tools include Environment Protection Regulations to support the Act and the Environmental Reference Standard (ERS).

Under the Act and subordinate legislation, the EPA classifies land to be contaminated when current and/or future protected environmental values for the relevant land use categories are precluded, this is considered to occur when relevant indicators and objectives of corresponding environmental values of the land environment set out in the ERS have not being met or have been exceeded.

8.2.2 Protected Environmental Values of Land in Victoria

The client has indicated they intend to retain the current Recreation / Open Space land use. The protected environmental values for this site and each of the respective land use scenarios are listed in the table below.

Table 5: Protected Environmental Values of Land under Environmental Reference Standard (ERS)

Environmental Values	Land Use						
			Sensitive Use				
	Parks and Reserves	Agricultural	(Other – Lower Density)	(High Density)	Recreation / Open Space	Commercial	Industrial
Maintenance of Ecosystems:							
- Natural Ecosystems	✓						
- Modified Ecosystems	✓	✓	✓		✓		
- Highly Modified Ecosystems		✓	✓	✓	✓	✓	✓
- Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings and Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of Food, Flora and Fibre	✓	✓	✓				

8.3 Adopted Soil Quality Objectives

The ERS provides indicators and objectives for the land environment in Table 4.3. This table refers to the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (the ASC NEPM) for indicators for inorganic and organic contaminants.

Soil quality objectives were primarily sourced from the ASC NEPM were made under the *National Environment Protection Council Act 1994* and given effect by individual legislation and guidelines in each state and territory, in Victoria this is gazetted into the subordinate legislation of the Act. The NEPM 1999 Guideline was amended in May 2013. The current national guidelines for the assessment of contaminated land is the *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1)*. This was originally gazetted by EPA Victoria as of 26 September 2013. The newly amended NEPM has been adopted as the main source of soil quality objectives for this report.

The purpose of the NEPM *is to 'establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry' (NEPC 2013).*

The desired environmental outcome for this NEPM is 'to provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination' (NEPM 2013).

The NEPM 2013 Guidelines provides investigation levels for soil and groundwater for the adequate assessment of site contamination, including Ecological Investigation Levels (EILs) and Health Investigation Levels (HILs) for various environmental value scenarios. These Investigation Levels are provided in Schedule B(1) *Guideline on Investigation Levels for Soil and Groundwater*.

Table 6: Summary of Environmental Reference Standard Land Environmental Values and Adopted Guideline Source

Environmental Value	Adopted Guideline Source
Maintenance of Ecosystems	The Environmental Reference Standard indicates the Maintenance of Ecosystems environmental value to be land quality that is suitable to protect soil health and the integrity and biodiversity of natural ecosystems, modified ecosystems and highly modified ecosystems. The objective for each indicator is the ecological investigation or screening level in the NEPM (ASC), unless (a) there is no such investigation or screening level; or (b) due to site specific characteristics the more appropriate objective is: (i) the level derived using the risk assessment methodology described in the NEPM (ASC); or (ii) the background level determined in accordance with section 36 of the Act, in which case the objective for the indicator is (i) or (ii), as applicable. Ecological investigation levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. EILs have been derived for As, Cu, CrIII, DDT, naphthalene, Ni, Pb and Zn. Schedule B5a provides detailed guidance on the framework for ecological risk assessment. The methodology for deriving EILs is described in Schedule B5b and the detailed derivations of EILs for Arsenic, Copper, Chromium III, DDT (Dichloro-Diphenyl-Trichloroethane), Lead, Naphthalene, Nickel, and Zinc are presented in Schedule B5c. A spreadsheet, which has been used in this assessment for calculating site-specific EILs is included in the ASC NEPM Toolbox. Physicochemical property information used in the EIL

Environmental Value	Adopted Guideline Source
	calculation includes soil pH, Cation Exchange Capacity and % Clay which will determine the added contaminant limits. The final EIL is derived through the summation of the added contaminant limit and ambient background concentrations. The EILs generally apply to the top 2m of the soil profile. The NEPM also provides ecological screening levels (ESLs) which have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil. In the absence of Australian criteria, Canadian and US EPA Environmental Quality guidelines were also considered.
Human Health	The Environmental Reference Standard indicates the Human health environmental value to be land quality that is suitable for the specific land use and safe for the human use of that land. The objective for each indicator is the health investigation or screening level in the NEPM (ASC), unless (a) there is no such investigation or screening level; or (b) due to site specific characteristics the more appropriate objective is: (i) the level derived using the risk assessment methodology described in the NEPM (ASC); or (ii) the background level determined in accordance with section 36 of the Act, in which case the objective for the indicator is (i) or (ii), as applicable. NEPM 2013 Schedule B(1) *Guideline on Investigation Levels for Soil and Groundwater* provides tier 1 investigation levels considered protective of human health for a range of beneficial use scenarios. These are referred to as Health Investigation Levels (HILs), each beneficial use scenario under the NEPM 2013 Guideline is listed below: - HIL A – Residential with garden / accessible soils (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, primary and preschools. - HIL B – Residential with minimal opportunities for soil access, inclusive of dwellings with fully and permanently paved yard space such as high-rise buildings and apartments. - HIL C – Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate. - HIL D – Commercial / industrial, includes premises such as shops, offices, factories and industrial sites. It is recommended that the NEPM 2013 HILs only be used where there is adequate characterisation of the site. The maximum and 95% upper confidence limit (UCL) average contaminant concentration should be compared to the Tier 1 HILs, with consideration paid to localised elevated contaminant concentrations. Where there is insufficient data available, and it is appropriate for the exposure being evaluated, the arithmetic mean (or geometric mean in cases where the data is log normally distributed) should also be compared to the relevant Tier 1 HILs or site specific screening level. The results should also be assessed against the following: - The standard deviation of the results must be less than 50% of the relevant HIL. - No single contaminant concentration should exceed 250% of the relevant HIL. NEPM Health Screening Levels (HSLs) have been adopted. These have been developed by CRC Care for various petroleum hydrocarbon compounds at various depths to assess the potential for vapour intrusion.

<table>
<tr><th>Environmental Value</th><th>Adopted Guideline Source</th></tr>
<tr><td></td><td>In the case of Tier 1 screening criteria not being available for contaminants of concern, US EPA and Canadian Soil Quality Guidelines criteria were applied.</td></tr>
<tr><td>Buildings and Structures</td><td>The Environmental Reference Standard indicates the Buildings and structures environmental value to be land quality that is not corrosive to buildings, structures, property and materials.
The ERS cites the indicators to be pH, sulfate, chloride, redox potential, salinity or any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures. The objective is land that is not corrosive to or otherwise adversely affecting the integrity of structures or building materials
The NEPM 2013 Guidelines do not provide guidance on the requirements to protect buildings and structures. Screening criteria to evaluate potential for harm to human health via a vapour intrusion pathway are provided. The Victorian Land SEPP requires that “Contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials”. The Victorian Land SEPP specifies pH and Sulphate concentrations as primary physical parameters, with consideration for redox potential, salinity and other wastes, should the requirement arise, that are likely to have a detrimental impact on a structures integrity.
An assessment of the potential impacts of the underlying soils on buildings and structures can be made by referring to AS2159-2009 Piling Design and Installation. Table 6.4.2 (c) of this standard indicates a pH >5.5 and sulphates in soil <5000mg/kg (for concrete piles) are considered to be non-aggressive.</td></tr>
<tr><td>Aesthetics</td><td>The Environmental Reference Standard indicates the Aesthetics environmental value to be that Aesthetic issues do not adversely impact the use of land. Aesthetic issues include the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity.
The ERS cites the objective to be land that is not offensive to the senses of human beings.
Although there is no concentration based aesthetic criteria for soils, the Victorian Land SEPP states that “contamination must not cause the land to be offensive to the senses of human beings”. All soil samples have been screened against the assessment ranking system below.

<table>
<tr><th>Ranking</th><th>Description</th><th>Ranking</th><th>Description</th></tr>
<tr><td>0</td><td>No visual evidence of contamination</td><td>A</td><td>No odour</td></tr>
<tr><td>1</td><td>Slight visual evidence of contamination (e.g. traces)</td><td>B</td><td>Slight offensive odour</td></tr>
<tr><td>2</td><td>Visual evidence (e.g. greater than trace amounts)</td><td>C</td><td>Moderate offensive odour</td></tr>
<tr><td>3</td><td>Obvious visual evidence of contamination (e.g. significant staining and discolouration)</td><td>D</td><td>Strong offensive odour</td></tr>
</table>
The ASC NEPM (1999) (as amended 2013) specifies that soils should not be discoloured, malodourous nor be of an abnormal consistency (i.e. containing putrescible refuse, green waste or large quantities of timber, which may generate landfill gas).</td></tr>
<tr><td>Production of Food, Fibre and Flora</td><td>The Environmental Reference Standard indicates the Production of food, flora and fibre environmental value to be land quality that is suitable for the safe human consumption of food, flora and fibre and that does not adversely affect produce quality or yield.
The Environmental Reference Standard (ERS) states the following objectives for Production of Food, Fibre and Flora:</td></tr>
</table>

Environmental Value	Adopted Guideline Source
	- *The levels specified in the Food Standards Code detected in any food, flora or fibre produced at the site, and* - *Levels that do not adversely affect produce quality or yield.* The NEPM 2013 Guidelines do not provide guideline values for the protection of this beneficial use. In the absence of officially adopted investigation levels, the use of EILs are considered protective of this beneficial use.

8.4 ADOPTED WASTE DISPOSAL GUIDELINES

8.4.1 Adopted Waste Disposal Criteria for Soils

In Victoria, waste must be classified to meet waste duties under Part 6.4 (*Duties relating to industrial waste*) and 6.5 (*Duties and controls relating to priority waste*) of the Environment Protection Act 2017. The Environment Protection Regulations (*the Regulations*), Part 4.2 (*Industrial Waste and priority waste*) specifies the process for classifying waste. This new framework is intended to ensure that all waste generators, transporters, and waste managers are proactive in their management of risks to human health and the environment, to comply with the new General Environmental Duty (GED) and to support and encourage waste resource recovery and reuse.

In addition to the GED, new duties are attached to each classification of waste. Waste generators or managers must classify industrial wastes that they manage, including waste soils originating from contaminated land, as Industrial Waste, Priority Waste or Reportable Priority Waste. Waste codes are set out in Schedule 5 of the Regulations, where different types of waste are pre-classified or classification is based on a mirror code, where it is identified that the waste may be hazardous or not hazardous dependent on the circumstances, requiring further classification.

Each waste type has Duties and Controls that apply to that type of waste, these are outlined in the table below. These duties and any associated controls will accumulate, this means that each tier of waste must be managed with regard to the duties and controls of the tiers below it.

Table 7: Waste Types and Corresponding Duties Under the Act

Waste Type	Description	Duties Under the Act
Industrial Waste	Operators who generate industrial waste must take reasonable steps to ensure that wastes are not illegally dumped and are instead taken to a lawful place where the receivers have authorisation to receive it.	Duties of persons depositing Industrial Waste Duties of persons receiving Industrial Waste Duty of persons involved in transporting Industrial Waste
Priority Waste	The concept of Priority Waste introduces tailored controls for specific wastes that have the potential to be recycled, reused or yield recovered resources. Persons managing priority wastes will be required to take all reasonable steps to consider alternatives to disposal.	*Plus:* Duties of persons managing Priority Waste (This includes a duty to investigate alternatives to waste disposal)
Reportable Priority Waste	Reportable priority waste is a subset of priority waste that holds the highest levels of risk and has more stringent controls on its management. The new regulations state that the EPA must be notified of the following transactions:	*Plus:* Duty to notify of transaction in Reportable Priority Waste Duties of persons transporting Reportable Priority Waste

Waste Type	Description	Duties Under the Act
	- Consignment for transport of reportable priority waste - Transport of reportable priority waste - Receipt of reportable priority waste at a place or premises	

Extract from EPA Victoria Publication 1756 Summary of Waste Framework

The EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds*, is incorporated into the Regulations without modification. This publication establishes the characteristics and thresholds necessary for complying with the Regulations, specifically, classification of wastes to determine the relevant waste disposal category in accordance with Schedule 6 of the Regulations.

A holder of waste must use the criteria and thresholds in this publication to determine a waste disposal category unless the category is determined by the Regulations. A classification of priority waste must be consistent with any designation issued by the Authority for that type of priority waste.

Soils requiring offsite disposal should be sampled at the sampling rates recommended in the EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline and categorised in accordance with criteria listed in EPA Victoria Publication 1828.3.

Waste soil proposed to be removed offsite shall conform to one of the following categories stated in the table below.

Table 8: Summary of Requirements for Waste Soil Classification and Disposal Offsite and Available Management Options

Waste Soil Classification	EPA Victoria Requirements for Waste Soil Classification and Disposal Offsite	Management Options
Fill Material	Fill material is soil with extremely low levels of contamination. Fill material is considered safe to use without containment. Fill material is Industrial Waste, but not priority waste. Fill Material has contaminant concentrations below levels in Table 3 of Waste disposal categories – characteristics and thresholds (EPA Victoria Publication 1828.3). The soil must be analysed for all contaminants known and reasonably expected to be present in the soils.	- Fill Material must be sent to a lawful place. - Fill Material soils are generally suitable for reuse subject to a Declaration of Use. - Fill Material can be reused and contained onsite. - A permission to transport Fill Material is not required. It also does not need to be tracked. - The general environmental duty (GED) must be met to minimise risks of harm to human health and the environment.
Waste Acid Sulfate Soils	Potential and actual acid sulfate soils are classified as waste acid sulfate soil (WASS) when they don't contain: - contaminant concentrations exceeding the upper limits for Fill Material in Table 3 of Waste disposal categories – characteristics and thresholds (EPA Victoria Publication 1828.3) - Asbestos. If soil has contaminant concentrations exceeding the upper limits for Fill Material or contains asbestos, it's not classified as WASS. The soils will	When disposing of WASS offsite it must be sent to a lawful place: - If WASS is being sent for treatment or amelioration for reuse or offsite disposal, the receiving site needs an L08 registration. - Treating or ameliorating refers to neutralising acidification or potential acidification of soil. - If WASS is proposed to be sent to landfill, including for amelioration, you must send it to a landfill authorised to receive WASS.

Waste Soil Classification	EPA Victoria Requirements for Waste Soil Classification and Disposal Offsite	Management Options
	then be classified as Category A, B, C waste, Category D soil or soil containing asbestos only.	- If WASS is proposed to be strategically reburied it, the receiving site needs an A18 discharge to aquifer permit.
Soil Containing Asbestos Only	This Priority Waste Category only applies to soil that: - contains asbestos - doesn't have contaminant concentrations greater than the upper limit for fill material in Table 3 of Waste disposal categories – characteristics and thresholds (EPA Victoria Publication 1828.3). If the contaminant concentrations are higher, the soil is classified as Category A, B, C or D. If the contaminant concentrations are lower but the soil contains asbestos, it is soil containing asbestos only. Should reasonable practicable steps be taken to remove visible asbestos-containing material from soil, it's not considered soil containing asbestos only. In this case it might be recategorized as Fill Material.	Soil containing asbestos only is reportable priority waste. It must go to a place authorised to accept it, known as a lawful place. Soil containing asbestos only can be: - contained onsite - sent to a landfill authorised to accept soil with asbestos. This type of soil can be contained onsite in volumes under 1000m^3. The general environmental duty (GED) must be met to minimise risks of harm to human health and the environment. Containment of volumes greater than 1000m^3 onsite can be achieved with an L02 licence. A Site Management Order may be placed on the land title for ongoing management.
Category D Contaminated Soils	Category D is a priority waste category applying only to soil. Category D covers the least hazardous soils. Category D soil has contaminants: - greater than the upper limit for fill material on Table 3 of Waste disposal categories – characteristics and thresholds (EPA Victoria Publication 1828.3). - below the upper limit for Category D on Table 2 of the same publication. Category D soil is a reportable priority waste. It must go to a lawful place authorised to accept it.	Category D can be: - contained or reused onsite or on a project site. - treated to lower its contaminants so it becomes Fill Material. - sent to a landfill authorised to accept Category B, C or D soils. Category D soils can be contained onsite in volumes under 1000m^3. The general environmental duty (GED) must be met to minimise risks of harm to human health and the environment. Category D soils can be reused by containing them on a project site under an A17 permit. E.g. Category D soils can be reused in engineered railway and freeway embankments, or under roads and footpaths. Containment of volumes greater than 1000m^3 onsite can be achieved with an L02 licence. A Site Management Order may be placed on the land title for ongoing management.
Category C Contaminated Soils	Category C soil is a priority waste category that has contaminants: - greater than the upper limit for Category D in Table 2 of Waste disposal categories -	Category C soil can be: - contained onsite. - sent to a landfill authorised to accept Category B or C soil.

Waste Soil Classification	EPA Victoria Requirements for Waste Soil Classification and Disposal Offsite	Management Options
	characteristics and thresholds (EPA Victoria Publication 1828.3). - below the upper limit for Category C in Table 2.	- taken offsite to a lawful place and treated to reduce the level of contaminants. Treated waste may be reclassified as less hazardous Category D soil. The soils could then be managed under that category.
Category B Contaminated Soils	Category B soil is a priority waste category that has contaminants: - greater than the upper limit for Category C in Table 2 of Waste disposal categories - characteristics and thresholds (EPA Victoria Publication 1828.3). - below the upper limit for Category B in Table 2.	Category B soil can be: - contained onsite. - sent to a landfill authorised to accept it and taken offsite to a lawful place. - treated to reduce the level of contaminants. - treated waste may be reclassified as less hazardous Category C or D soil.
Category A Contaminated Soils	Category A soil is a priority waste category that has contaminants: - greater than the upper limit for Category B in Table 2 of Waste disposal categories - characteristics and thresholds (EPA Victoria Publication 1828.3).	Category A is the most hazardous type of waste. - Category A waste cannot be sent to landfill. - Category A waste including soil can be taken offsite to a lawful place and treated to reduce contaminants. - treated waste may be reclassified as less hazardous Category B, C or D waste. The soils can then be managed under that category.

Category A, B and C soils can be contained onsite in volumes under 1000m^3. The general environmental duty (GED) must be met to minimise risks of harm to human health and the environment.

Assuming the chemical contamination levels of the soils are below the fill material criteria, industrial wastes including, but not limited to, concrete, bricks, asphalt, PVC pipes, plastics, metals, wood etc. must be removed as far as reasonably practicable as per EPA Determination - *Specifications acceptable to the Authority for receiving fill material* (Victorian Government Gazette No. S301 on 18 June 2021).

8.4.2 Per- and Poly-Fluoroalkyl Substances (PFAS) Contamination

ASC NEPM (2013) do not include criteria for PFAS, therefore, the PFAS National Environmental Management Plan (PFAS NEMP 2.0) (HEPA, 2020), hence known as the Plan, has been used as guidance for the assessment and management of PFAS contamination in soil and water. The Plan was developed at the request of Environment Ministers around Australia, the Heads of EPAs Australia and New Zealand (HEPA) and the Australian Government Department of the Environment and Energy (DoEE) have collaborated to develop this Plan. The Plan is designed to achieve a clear, effective coherent and nationally consistent approach to the environmental regulation of PFAS.

The table below presents the screening levels derived for the protection of human health and the environment. The HISL and EISL for industrial/commercial use have been adopted for this assessment.

Table 9: Human Health and Ecological Screening Levels for PFAS Contamination in Soils

Exposure Scenario	PFOS / PFHxS	PFOA
Human Health – Residential with garden / accessible soil	0.01 mg/kg	0.1 mg/kg
Human Health – Residential with minimal opportunities for soil access	2 mg/kg	20 mg/kg
Human Health – Public open space	1 mg/kg	10 mg/kg
Human Health – Industrial / commercial	20 mg/kg	50 mg/kg
Interim soil – ecological direct exposure (All land uses)	1 mg/kg	10 mg/kg
Interim soil – ecological indirect exposure (All land uses)	0.01 mg/kg	-
Interim soil – ecological indirect exposure (Used for intensely developed sites with no secondary consumers and minimal potential for indirect exposure such as Industrial land use)	0.14 mg/kg	-

(Extracted from Tables 2 and 3, HEPA 2020)

EPA Victoria has adopted the PFAS NEMP 2.0 (HEPA 2020). EPA Victoria takes a precautionary approach to PFAS as they are persistent, accumulative and mobile. EPA Victoria Publication 1828.3 and EPA Designation - *Classification of PFAS-impacted soil* (State Government of Victoria, 2022) include Fill Material criteria for PFOS, PFHxS and PFOA. Table 2 of EPA Victoria Publication 1828.3 provides total concentration and leachable concentration landfill acceptance criteria for PFOA and Total sum of PFOS + PFHxS.

EPA Designation - *Classification of PFAS-impacted soil* (State Government of Victoria, 2022) criteria indicates that waste soil impacted by per-and poly-fluorinated alkyl substances (PFAS) which contains less than upper limit PFAS contaminant concentrations (as listed below) and otherwise complies with the requirements specified in the designation as fill material, and is not priority waste, can be classified as Fill Material. The below criteria are not applicable to Commonwealth land.

- PFOS <0.002 mg/kg
- PFHxS <0.001 mg/kg
- PFOA <0.001 mg/kg

9. NEPM ECOLOGICAL INVESTIGATION LEVELS

Ecological Investigation Levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on the species sensitivity distribution (SSD) model developed for Australian conditions. Areas assumed to be deep soil zones for landscaping purposes are also assessed against the NEPM 2013 EILs for selected petroleum hydrocarbon fractions, BTEX and Benzo(a)pyrene, and the derived EILs for Arsenic, Copper, Chromium (III), Nickel, Lead, Zinc, DDT and Naphthalene which have been adopted for the protection of terrestrial ecosystems.

The table below provides a summary of adopted Added Contaminant Levels (ACL) and Ambient Contaminant Concentrations (ABCs) for the derivation of Copper, Chromium (III), Nickel, Lead and Zinc EILs. Generic EILs were adopted for ecological assessment in relation to Arsenic, DDT and Naphthalene.

The assessor has determined that the soils underlying the site are to be classified as aged soils (>2years) due to the soils being in-situ for greater than this time period. Tabulated in Appendix G are details of the site specific EILs for the site soils for each site.

10. QUALITY ASSURANCE AND QUALITY CONTROL

10.1 Quality Control Procedures

A.S.James implemented a comprehensive Quality Assurance and Quality Control (QA/QC) programme as part of field soil sampling procedures, and conformed to the following guidelines and standards where it is deemed necessary:

- NSW EPA Sampling Design Part 1 – Application - Contaminated Land Guidelines (2022)
- NSW EPA Sampling Design Part 2 – Interpretation - Contaminated Land Guidelines (2022)
- National Environment Protection Council (NEPC), 2013, The National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) as amended 2013.
- Industrial Waste Resource Guidelines (IWRG) Sampling and Analysis of Waters, Wastewaters, Soils and Wastes, Victorian EPA Publication IWRG 701, June 2009.
- Site Characterisation Considerations, Sampling Precautions and Laboratory Analytical Methods for Per- and Polyfluoroalkyl Substances (PFAS), April 2020.
- Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), January 2017.

The implemented QA/QC programme included the following documentation and procedures:

- The presence of an appropriately qualified and trained Environmental Engineer (Contaminated Land) to conduct the site assessment.
- The use of clear, concise and standardised field logs to record and document findings during the site assessment.
- Ensure the appropriate preservation of samples during transport from the field to the laboratory.
- Decontamination of equipment prior to sampling, and between each sampling event. This was achieved through the use of deionised water and Decon 90. The equipment was thoroughly cleaned through rigorous scrubbing to avoid cross-contamination between sampling events.
- Use of completed Chain of Custody (CoC) document, filled out at end of sampling activity or end of day, to ensure the traceability of sample transport and handling.
- Samples were sent to laboratories accredited by the National Association of Testing Authorities (NATA), ALS Environmental Division (Primary Laboratory) – Eurofins (Secondary Laboratory), for the analysis of retrieved soil samples.
- Collection and analysis of field quality control samples, inclusive of Trip Blanks (where appropriate), Primary Duplicates and Secondary Duplicates.
- Use of laboratory provided glass sample jars with Teflon lined screw-on caps, dedicated plastic PFAS soil sample jars, any water samples were placed into laboratory supplied glass or plastic bottles/jars with Teflon lined screw-on caps.
- Compliance with laboratory holdings times.

- Comparison of field and analytical data to analyse for any irregularities or anomalies contained within the results.

10.2 Quality Assurance and Quality Control Data Quality Objectives

A.S.James adopted the following data quality objectives and analysis of the QA/QC data in accordance with National Environment Protection Council (NEPC), 2013, Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils. This consisted of analysing the following components of the analytical results.

- Primary duplicate and secondary duplicate samples were analysed against the results reported for the primary sample. This is achieved through the use of the relative percent difference (RPD) calculations, with an acceptable limit of +/- 30%.
- Review of laboratory spike sample results, with acceptable limits of 70-130% for organics and 85-115% for metals.
- Review of laboratory duplicate sample results, with acceptable limits of +/- 30%.
- Review of laboratory blank sample results, expected to be below detection limit.

To ensure consistency, the following methodology was employed when one or both of the parent / primary duplicate or parent / secondary duplicate pairs had results below limit of reporting (LOR). In the case of one duplicate pair reporting below LOR, the calculated RPD values adopted the value of the relevant laboratory reporting limit to enable calculation of the RPDs. Should both results report below LOR, the results were considered acceptable for the purpose of the investigation.

10.3 Soil Quality Control Samples

Quality control samples are retrieved and analysed to ensure the validity and usability of the data set collected, and will ensure that only representative and reliable data meeting the specified requirements is considered in the assessment.

10.4 Field Quality Control Programme

The quality control samples analysed and the implemented analysis schedule is provided in the table below.

Table 10: Quality Control Samples Retrieved and Analysed

Sample ID	Sample Type	Primary Sample ID	Laboratory	Analytes Tested
Soil Samples				
Blind A	Primary Duplicate	BH7-0.1	ALS Environmental	Organochlorine Pesticides
Dup-BH7-0.1	Secondary Duplicate	BH7-0.1	Eurofins	
Blind B	Primary Duplicate	BH5-1.0	ALS Environmental	Organochlorine Pesticides
Dup-BH5-1.0	Secondary Duplicate	BH5-1.0	Eurofins	
Blind C	Primary Duplicate	BH16-1.0	ALS Environmental	On Hold
Dup-BH16-1.0	Secondary Duplicate	BH16-1.0	Eurofins	
Blind C	Primary Duplicate	BH20-1.0	ALS Environmental	Organochlorine Pesticides
Dup-BH20-1.0	Secondary Duplicate	BH20-1.0	Eurofins	
Water Samples				
ASJRF 1	Rinsate Blank	-	ALS Environmental	Heavy Metals
ASJRF 2	Trip Blank	-	ALS Environmental	VOCs

10.5 Sampling Frequency

The recommended minimum sampling frequency of 10% blanks, or 1 in 20 sample ratio was achieved, and considered suitable for this assessment. This consisted of the recovery of a Primary Duplicate and Secondary Duplicate sample at locations where contamination was most likely to be encountered, i.e. within historic fill layers present. This provides a more representative quantitative assessment of calculated RPDs.

10.6 Quality Assurance and Quality Control Sample RPD Results

As stated previously, the quality of the primary laboratory (ALS Environmental) data generated was assessed with appropriate laboratory Quality Control samples and using standard methods. The Quality Control samples used by the laboratory included internal spikes, duplicates and method blanks, these were analysed as part of the Quality Assurance programme.

The overall assessment of the implemented A.S.James Quality Assurance programme for the soil analyses has been made in terms of completeness. The completeness is equal to the percentage of valid Quality Assurance and Quality Control results. The Quality Assurance and Quality Control results for soil that meets the acceptance criteria include the following:

- Relative Percentage Differences (RPDs) +/- 30%.
- Spikes falling within range of 70-130% for organics and 85-115% for metals.
- Duplicates within range of +/- 30% for both metals and organics.
- Laboratory equipment blanks expected to be below detection limit.

A summary of the primary duplicate and secondary duplicate results is provided in Appendix E. A summary of the Quality Control data collected and reported along with a calculation of completeness is provided in the table below.

Table 11: Summary of Quality Assurance Completeness

Sample Type	Total No. of Results	No. of Results not Meeting Data Quality Objectives	Percentage of Results Meeting Data Quality Objectives
Laboratory Duplicates	425	0	**100.00**
Laboratory Spikes	303	19	**93.73**
Method Blanks	455	0	**100.00**
Primary Duplicates	60	0	**100.00**
Secondary Duplicates	60	0	**100.00**
Overall Completeness	**1303**	**19**	**98.54**

11. ANALYTICAL LABORATORY RESULTS

11.1 Laboratory Results

The results of the analytical tests of the in-situ soils are given in the attached ALS (Environmental Division) reports with reference 242283, refer to Appendix C. Refer to Appendix D for tabulated results screened against adopted criteria for all contaminants tested. The table below refers to those contaminants that have exceeded the adopted criteria for the site.

Table 12: Summary of Environmental Soil Quality Conditions in Soil Samples Retrieved (Woolamai Site) (mg/kg)

Analyte	Concentration Range (mg/kg)	NEPM 2013 Soil Quality Criteria				Fill Material Criteria	Category D Criteria	Category C Criteria	Category B Criteria
		Ecological Investigation Levels (EILs)[1]	Buildings and Structures	NEPM HILs C	NEPM HILs D				
Arsenic	<5-140	*100*	-	*300*	*3000*	*20*	*500*	*500*	*2000*
TRHs F3	<50-380	*300*	-	-	-	-	-	-	-
Benzo(a)pyrene	<0.1-2.4	*0.7*	-	-	-	*1*	*20*	*40*	*160*
Benzo(a)pyrene TEQ	<0.1-3.6	-	-	*3*	*40*	-	-	-	-
pH	5.4-7.1	-	*>5.5*	-	-	*4-10*	-	-	*2-12.5*

1- Urban Residential and Open Public Spaces Land Use

Table 13: Summary of Environmental Soil Quality Conditions in Soil Samples Retrieved (Glen Forbes Site) (mg/kg)

Analyte	Concentration Range (mg/kg)	NEPM 2013 Soil Quality Criteria				Fill Material Criteria	Category D Criteria	Category C Criteria	Category B Criteria
		Ecological Investigation Levels (EILs)[1]	Buildings and Structures	NEPM HILs C	NEPM HILs D				
Arsenic	<5-210	*100*	-	*300*	*3000*	*20*	*500*	*500*	*2000*

1- Urban Residential and Open Public Spaces Land Use

Table 14: Summary of Environmental Soil Quality Conditions in Soil Samples Retrieved (Kernot Site) (mg/kg)

Analyte	Concentration Range (mg/kg)	NEPM 2013 Soil Quality Criteria				Fill Material Criteria	Category D Criteria	Category C Criteria	Category B Criteria
		Ecological Investigation Levels (EILs)[1]	Buildings and Structures	NEPM HILs C	NEPM HILs D				
Arsenic	<5-230	*100*	-	*300*	*3000*	*20*	*500*	*500*	*2000*
pH	4.9-6.0	-	*>5.5*	-	-	*4-10*	-	-	*2-12.5*
PFOS	<0.0002-0.23	-	-	-	-	*0.002*	-	-	-
PFHxS	<0.0002-0.032	-	-	-	-	*0.001*	-	-	-

1- Urban Residential and Open Public Spaces Land Use

Table 15: Summary of Environmental Soil Quality Conditions for PFAS in Soil Samples Retrieved (Kernot Site) (mg/kg)

Analyte	Concentration Range	PFAS National Environmental Management Plan		
		Interim Soil - Ecological Indirect Exposure (All Land Uses)[1]	Interim Soil – Ecological Direct Exposure (All Land Uses)[1]	Human Health – Public Open Space - (NEPM HILs C Equivalent)
Total PFOS and PFHxS	<0.0002-0.26	0.01[1]	1	1

1-All land uses criteria not applicable for this site given the proposed industrial land use

Table 16: Summary of Environmental Soil Quality Conditions in Soil Samples Retrieved (Woodleigh Site) (mg/kg)

Analyte	Concentration Range (mg/kg)	NEPM 2013 Soil Quality Criteria				Fill Material Criteria	Category D Criteria	Category C Criteria	Category B Criteria
		Ecological Investigation Levels (EILs)[1]	Buildings and Structures	NEPM HILs C	NEPM HILs D				
pH	5.4-6.2	-	*>5.5*	-	-	*4-10*	-	-	*2-12.5*

1- Urban Residential and Open Public Spaces Land Use

12. EVALUATION OF ENVIRONMENTAL RISK

12.1 Human Health

Exceedances of the proposed environmental value is detailed below.

12.1.1 Recreation / Open Space Land Use (NEPM HILs C)

Woolamai Site

An exceedance of the adopted NEPM HILs C criteria (*considered protective of human health in a Recreation / Open Space land use setting*) was reported for Benzo(a)pyrene TEQ. Statistical analysis of the Benzo(a)pyrene TEQ dataset could not be undertaken due to lack of sampling density.

Therefore, this environmental value has been precluded at this stage. Further sampling and analysis of the site soils will be required.

Glen Forbes Site

No exceedances of the adopted NEPM HILs C criteria (*considered protective of human health in a Recreation / Open Space land use setting*) were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

Kernot Site

No exceedances of the adopted NEPM HILs C criteria (*considered protective of human health in a Recreation / Open Space land use setting*) were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

Woodleigh Site

No exceedances of the adopted NEPM HILs C criteria (*considered protective of human health in a Recreation / Open Space land use setting*) were reported. Therefore, this environmental value has not been precluded at this stage. Further sampling and analysis of the site soils will be required.

12.1.2 Commercial Land Use (NEPM HILs D – Adopted for Protection of Construction Worker Health)

Woolamai Site

No exceedances of the adopted NEPM HILs D criteria (*considered protective of construction worker health*) were reported. Therefore, this environmental value has not been precluded at this stage.

Glen Forbes Site

No exceedances of the adopted NEPM HILs D criteria (*considered protective of construction worker health*) were reported. Therefore, this environmental value has not been precluded at this stage.

Kernot Site

No exceedances of the adopted NEPM HILs D criteria (*considered protective of construction worker health*) were reported. Therefore, this environmental value has not been precluded at this stage.

Woodleigh Site

No exceedances of the adopted NEPM HILs D criteria (*considered protective of construction worker health*) were reported. Therefore, this environmental value has not been precluded at this stage.

12.2 Maintenance of Ecosystems (NEPM EILs (Protection of Ecosystems – Modified and Highly Modified))

Woolamai Site

Exceedance of the adopted NEPM EIL and ESL criteria (considered protective of terrestrial ecosystems) were reported for Arsenic, Total Recoverable Hydrocarbons F3 and Benzo(a)pyrene. Statistical analysis of the Arsenic, Total Recoverable Hydrocarbons F3 and Benzo(a)pyrene datasets could not be undertaken due to lack of sampling density.

Therefore, this environmental value has been precluded at this stage. Further sampling and analysis of the site soils will be required.

Glen Forbes Site

An exceedance of the adopted NEPM EIL and ESL criteria (considered protective of terrestrial ecosystems) was reported for Arsenic. Statistical analysis of the Arsenic dataset could not be undertaken due to lack of sampling density.

Therefore, this environmental value has been precluded at this stage. Further sampling and analysis of the site soils will be required.

Kernot Site

Exceedance of the adopted NEPM EIL and ESL criteria (considered protective of terrestrial ecosystems) were reported for Arsenic. Statistical analysis of the Arsenic dataset could not be undertaken due to lack of sampling density.

Therefore, this environmental value has been precluded at this stage. Further sampling and analysis of the site soils will be required.

Woodleigh Site

No exceedances of the adopted NEPM EIL and ESL criteria (*considered protective of terrestrial ecosystems*) were reported, therefore, this environmental value has not been precluded at this stage.

12.3 Soil Aesthetics

Woolamai Site

In the absence of concentration based aesthetics criteria, all of the soil samples were screened against the ranking system for soils as per Table 6. The soil samples reported generally slight to no visual evidence of contamination and no olfactory signs of contamination.

The aesthetics of the site soils were considered not to be offensive to human senses in a Recreation / Open Space land use setting.

Glen Forbes Site

In the absence of concentration based aesthetics criteria, all of the soil samples were screened against the ranking system for soils as per Table 6. The soil samples reported generally slight to no visual evidence of contamination and no olfactory signs of contamination, with exception to Borehole 9 which reported visual evidence of contamination (brick fragments, coal fragments, ballast etc.).

The aesthetics of the site soils were considered generally not to be offensive to human senses in a Recreation / Open Space land use setting, with exception to soils present in the vicinity of Borehole 9.

Kernot Site

In the absence of concentration based aesthetics criteria, all of the soil samples were screened against the ranking system for soils as per Table 6. The soil samples reported generally slight to no visual evidence of contamination and no olfactory signs of contamination.

The aesthetics of the site soils were considered not to be offensive to human senses in a Recreation / Open Space land use setting.

Woodleigh Site

In the absence of concentration based aesthetics criteria, all of the soil samples were screened against the ranking system for soils as per Table 6. The soil samples reported generally slight to no visual evidence of contamination and no olfactory signs of contamination.

The aesthetics of the site soils were considered not to be offensive to human senses in a Recreation / Open Space land use setting.

12.4 Buildings and Structures

Woolamai Site

Although limited, the reported Chloride and Sulfate dataset did not exceed any of the adopted criteria.

The reported pH values in the site soils generally did not exceed the adopted criterion, however, two soil samples in Borehole 5 indicated exceedances of the adopted criterion. Based on these exceedances the site soil values generally suggest a mild exposure condition as described by the exposure classification for concrete piles in soil, set out in Australian Standard AS 2159-2009. It is A.S.James' opinion that the current site soil status poses no potential harm or detriment to the environmental value of Buildings and Structures, provided building materials are suitably chosen for this exposure condition.

It should be understood that this report is not intended to be a corrosion risk assessment report and it is recommended that further specialist advice regarding potential corrosion risk of the soil to proposed structures be sought.

Glen Forbes Site

Although limited, reported pH levels did not exceed any of the adopted criteria.

Based on the reported soil values it likely suggests a non-aggressive exposure condition as described by the exposure classification for concrete piles in soil, set out in Australian Standard AS 2159-2009. It is the A.S.James' opinion that the current site soil status poses no potential harm or detriment to the environmental value of Buildings and Structures, provided building materials are suitably chosen for this exposure condition.

Kernot Site

Although limited, the reported Chloride and Sulfate dataset did not exceed any of the adopted criteria.

The reported pH values in the site soils generally did not exceed the adopted criterion, however, two soil samples in Borehole 13 and 15 indicated exceedances of the adopted criterion. Based on these exceedances the site soil values generally suggest a mild exposure condition as described by the exposure classification for concrete piles in soil, set out in Australian Standard AS 2159-2009. It is A.S.James' opinion that the current site soil status poses no potential harm or detriment to the environmental value of Buildings and Structures, provided building materials are suitably chosen for this exposure condition.

Woodleigh Site

Although limited, the reported Chloride and Sulfate dataset did not exceed any of the adopted criteria.

The reported pH values in the site soils generally did not exceed the adopted criterion, however, one soil sample in Borehole 20 indicated exceedance of the adopted criterion. Based on this exceedance the site soil values generally suggest a mild exposure condition as described by the exposure classification for concrete piles in soil, set out in Australian Standard AS 2159-2009. It is A.S.James' opinion that the current site soil status poses no potential harm or detriment to the environmental value of Buildings and Structures, provided building materials are suitably chosen for this exposure condition.

13. PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN (JANUARY 2020)

Woolamai Site

No exceedances of the adopted criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

Glen Forbes Site

No exceedances of the adopted criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

Kernot Site

One exceedance of the adopted Interim Soil Ecological Indirect (all land uses) criteria was reported for Sum of PFOS + PFHxS in Borehole 16. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Direct Exposure criteria and Human Health Screening Value for Soil criteria.

Statistical analysis of the Sum of PFOS + PFHxS dataset could not be undertaken due to lack of sampling density. ASLP leachability for acidic and neutral conditions was also not undertaken.

Therefore, this adopted criterion has been precluded at this stage. Further sampling and analysis of the site soils will be required to determine the spatial spread of PFAS contamination at the site.

Woodleigh Site

No exceedances of the adopted criteria were reported. All reported Sum of PFOS + PFHxS and PFOA concentrations were less than the Interim Soil Ecological Indirect and Direct Exposure criteria, and Human Health Screening Value for Soil criteria.

14. EPA VICTORIA WASTE SOIL CLASSIFICATION ASSESSMENT

Woolamai Site

The laboratory analysis of soil samples retrieved from the in-situ soils reported exceedances of the upper limits for Fill Material as per Table 3 of EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* for Arsenic and Benzo(a)pyrene.

Statistical analysis of the Arsenic and Benzo(a)pyrene datasets could not be undertaken due to lack of sampling density.

Therefore, based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic and Benzo(a)pyrene contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic and Benzo(a)pyrene.

Glen Forbes Site

The laboratory analysis of soil samples retrieved from the in-situ soils reported exceedances of the upper limits for Fill Material as per Table 3 of EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* for Arsenic.

Statistical analysis of the Arsenic dataset could not be undertaken due to lack of sampling density.

Therefore, based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic.

Kernot Site

The laboratory analysis of soil samples retrieved from the in-situ soils reported exceedances of the upper limits for Fill Material as per Table 3 of EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds* for Arsenic, PFOS and PFHxS.

Statistical analysis of the Arsenic, PFOS and PFHxS datasets could not be undertaken due to lack of sampling density.

Therefore, based on the highest reported contaminant concentration method the site soils were classified preliminarily as **Category D** Reportable Priority Waste (*Waste Code N120*) due to Arsenic, PFOS and PFHxS contamination. Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*. ASLP leachability testing will also be required for Arsenic and Sum of PFOS and PFHxS.

Woodleigh Site

The laboratory analysis of soil samples retrieved from the in-situ soils reported no exceedances of the upper limits for Fill Material as per Table 3 of EPA Victoria Publication 1828.3 *Waste disposal categories – characteristics and thresholds*. Therefore, the site soils are preliminarily classified as **Fill Material** (*Industrial Waste - Waste Code N122*).

Further sampling and analysis of the site soils will be required to meet the minimum requirements of EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils*.

15. ASBESTOS

During sampling the A.S.James' Environmental Engineer did not observe any asbestos containing material (ACM) fragments on the surface of the site nor were they encountered within any of the soil cuttings generated during intrusive investigation. All soil samples analysed for asbestos indicated no presence of asbestos.

Should ACM be encountered it is recommended that an occupational / asbestos hygienist be engaged to provide appropriate advice on the abatement of the asbestos contamination.

16. REVIEW OF CONTAMINATED LAND DUTIES

16.1 General Environmental Duty (GED)

The Environment Protection Act 2017 (the Act) requires a person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable. As such, measures must be taken to ensure that all activities onsite are managed in such a way so as to prevent pollution or waste that may give rise to risks of harm to human health or the environment.

16.2 Duty to Manage

Section 39 of the Act requires that a person in management or control of contaminated land must minimise risks of harm to human health and the environment from the contaminated land so far as reasonably practicable.

This obligation includes identifying any contamination a person should reasonably know about and assess that contamination. Manage the contamination by minimising the risks to human health and the environment so far as reasonably practicable and notify people who may be affected by the contamination.

In this regard, the Duty to Manage creates an obligation for the person(s) in management or control of the land to assess the sites contamination status, to manage any contamination identified, and to notify affected receptors.

16.3 Duty to Notify

The Act requires certain types of contamination of land and groundwater to be notified to EPA Victoria. Section 40 of the Act (*duty to notify*) requires a person in management or control of land with contamination that meets the definition of '*notifiable contamination*' to notify EPA Victoria of that contamination.

Section 3 of EPA Publication 2008 (EPA 2021a) provides a series of questions that need to be answered, in order to determine what constitutes contaminated land requiring EPA notification. Appendix A of the publication provides a summary of notification triggers by segment of the environment. The Duty to Notify is retroactive.

17. DATA GAPS AND ISSUES OF CONCERN

Further sampling in accordance with EPA Victoria Publication 702.2 *Soil Sampling for Waste Soils* guideline may be required for the site soils depending on the volume of soils proposed to be removed offsite.

Statistical analysis of the contaminant datasets at each of the sites could not be undertaken due to lack of sampling density, therefore, further sampling and analysis is recommended.

ASLP leachability testing for contaminants exceeding the Fill Material criteria at each of the sites will be required.

Further intrusive investigation of the site soils at the Glen Forbes site, to delineate the presence of visual contamination in Borehole 9 and determine its extents, is recommended. This is recommended, so as to prevent potential receptor contact with these aesthetically unpleasing soils at final development stage.

Further intrusive investigation of the site soils at the Kernot site, to confirm the presence of PFOS and PFHxS contamination in Borehole 16, delineate its extents and carry out necessary testing to determine the potential for reuse of soil in accordance with Figure 5 of the PFAS NEMP 2020 guideline.

Review of Planning Practice Note 30 (PPN 30), indicates that a Preliminary Site Investigation (PSI) will be required for each site, including a site history assessment. Railway yards / train stations are listed in Table 2 of PPN 30 as high potential for contamination. The risk matrix presented in Table 3 of PPN 30 shows that due to the recreation / open space land use proposed for the sites and the high potential for contamination (railway yards / train stations), a PSI would be required to inform the potential need for preliminary risk screen assessment or environmental audit.

Mitigation measures to effectively deal with the type of contamination reported on the sites include excavation and removal of contaminated soil offsite or installation of permanent barrier to prevent receptor contact with contamination. However, further sampling and analysis are recommended prior to this.

18. UNEXPECTED FINDS

Excavation can result in the unearthing of materials that differ from the soil descriptions. If material is encountered that appears different to the soil descriptions in Section 6 then an environmental consultant should be engaged to inspect and assess the material.

Obvious signs of contamination such as odorous material, solid inert waste, and/or staining can all be indicators of contamination.

19. LIMITATIONS OF PRELIMINARY SOIL CONTAMINATION ASSESSMENT

This report has been prepared for use by the client (***Michael Smith and Associates***) who has commissioned the works in accordance with the project brief only and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

A.S.James accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by A.S.James, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, A.S.James reserves the right to review the report in the context of the additional information.

Should any point remain in doubt please do not hesitate to contact this office.

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APPENDIX A

Sampling Point Locations



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JOB: Woolamai to Nyora Rail Trail
Former Woolamai Train Station Site

Job No: 123072 E1 **Date:** 17 Dec 2024

LEGEND

Denotes approximate Environmental borehole location

BOREPLAN

Checked: P. Beasley
Drawn: R. Summerville

Figure 1



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JOB: Woolamai to Nyora Rail Trail
Former Glen Forbes Train Station Site

Job No: 123072 E1 **Date:** 17 Dec 2024

LEGEND

Denotes approximate Environmental borehole location

BOREPLAN

Checked: P. Beasley
Drawn: R. Summerville

Figure 2



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JOB: Woolamai to Nyora Rail Trail
Former Kernot Train Station Site

Job No: 123072 E1 **Date:** 17 Dec 2024

LEGEND

Denotes approximate Environmental borehole location

BOREPLAN

Checked: P. Beasley
Drawn: R. Summerville

Figure 3



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JOB: Woolamai to Nyora Rail Trail
Former Woodleigh Train Station Site

Job No: 123072 E1 **Date:** 17 Dec 2024

LEGEND

Denotes approximate Environmental borehole location

BOREPLAN

Checked: P. Beasley
Drawn: R. Summerville

Figure 4

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Location: Woolamai to Nyora Rail Trail **Borehole** 1

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Dark Grey	**0.00**		
	Silt			
	Gravel and Root Zone		*	Soil Sample No: BH1-0.1
	Moist			Contamination Ranking = 1/A PID = 0ppm
	Medium Dense			
	No Hydrocarbon Odour or Staining			
		0.30		
Fill	Dark Grey			
	Sand			
	Moist			
	Medium Dense	**0.50**	*	Soil Sample No: BH1-0.5
	No Hydrocarbon Odour or Staining			Contamination Ranking = 0/A PID = 0ppm
Silt (ML)	Light Grey-Grey			
	Clay			
	Root Zone			
	Dry	**0.80**		
	Dense			
	No Hydrocarbon Odour or Staining			
Clay (CL)	Grey-Brown	**1.00**	*	Soil Sample No: BH1-1.0
	Silt and Sand			Contamination Ranking = 0/A PID = 0ppm
	Root Zone			
	Moist			
	Stiff			
	No Hydrocarbon Odour or Staining			
	End of Environmental Borehole			

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 5**
l Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 2

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Dark Grey	**0.00**		
	Clayey Silt			
	Gravel and Root Zone		*	Soil Sample No: BH2-0.1
	Moist			Contamination Ranking = 1/A PID = 0ppm
	Medium Dense			
	No Hydrocarbon Odour or Staining			
		0.30		
Silt (ML)	Dark Grey			
	Clay			
	Root Zone			
	Moist	**0.50**	*	Soil Sample No: BH2-0.5
	Dense			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
Clay (CL)	Light Grey-Brown-Orange			
	Silty Clay / Clayey Silt			
	Root Zone			
	Dry			
	Stiff			
	No Hydrocarbon Odour or Staining			
		1.00	*	Soil Sample No: BH2-1.0
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 6**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 3

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Dark Grey	**0.00**		
	Clayey Silt			
	Gravel and Root Zone		*	Soil Sample No: BH3-0.1
	Moist			Contamination Ranking = 2/A PID = 0ppm
	Medium Dense			
	No Hydrocarbon Odour or Staining			
		0.30		
Silt (ML)	Light Grey-Grey			
	Clay			
	Root Zone			
	Dry	**0.50**	*	Soil Sample No: BH3-0.5
	Dense			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
Clay (CL)	Grey-Brown			
	Silty			
	Root Zone			
	Moist			
	Stiff			
	No Hydrocarbon Odour or Staining			
		1.00	*	Soil Sample No: BH3-1.0
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 7**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 4

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Dark Grey	**0.00**		
	Clayey Silt			
	Gravel and Root Zone		*	Soil Sample No: BH4-0.1
	Moist			Contamination Ranking = 0/A PID = 0ppm
	Medium Dense	**0.20**		
	No Hydrocarbon Odour or Staining			
		0.30		
Silt (ML)	Dark Grey			
	Clay			
	Root Zone			
	Dry		*	Soil Sample No: BH4-0.5
	Dense			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
Clay (CL)	Dark Grey-Brown			
	Silty with Sand			
	Root Zone			
	Moist			
	Stiff			
	No Hydrocarbon Odour or Staining			
		1.00	*	Soil Sample No: BH4-1.0
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 8**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 5

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Gravel and Root Zone			*	Soil Sample No: BH5-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense	**0.20**			
	No Hydrocarbon Odour or Staining				
		0.30			
Silt (ML)	Dark Grey				
	Clay				
	Root Zone				
	Dry			*	Soil Sample No: BH5-0.5
	Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
Clay (CL)	Grey-Brown				
	Silty with Sand				
	Root Zone				
	Moist				
	Firm				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH5-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm
					Blind B and Duplicate Retrieved

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 9**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 6

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Gravel and Root Zone			*	Soil Sample No: BH6-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
		0.30			
Silt (ML)	Dark Grey				
	Clay	**0.40**			
	Root Zone				
	Dry			*	Soil Sample No: BH6-0.5
	Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
Clay (CL)	Grey-Brown				
	Silty with Sand				
	Root Zone				
	Moist				
	Firm				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH6-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 10**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 7

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Brown	**0.00**			
	Clayey Silt				
	Root Zone			*	Soil Sample No: BH7-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense				Blind A and Duplicate Retrieved
	No Hydrocarbon Odour or Staining				
		0.30			
Silt (ML)	Dark Grey				
	Clay				
	Root Zone				
	Moist	**0.50**		*	Soil Sample No: BH7-0.5
	Medium Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
Clay (CL)	Grey-Brown				
	Sand and Silt				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH7-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 11**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 8

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Dark Brown	**0.00**		
	Clayey Silt			
	Ballast, Cobbles and Root Zone		*	Soil Sample No: BH8-0.1
	Moist			Contamination Ranking = 1/A PID = 0ppm
	Medium Dense	**0.20**		
	No Hydrocarbon Odour or Staining			
Fill	Grey-Brown			
	Silty Clay			
	Root Zone			
	Moist		*	Soil Sample No: BH8-0.5
	Stiff			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
Silt (ML)	Dark Grey-Grey	**0.70**		
	Clay			
	Root Zone			
	Moist			
	Dense			
	No Hydrocarbon Odour or Staining			
			*	Soil Sample No: BH8-1.0
				Contamination Ranking = 0/A PID = 0ppm
Clay (CL)	Grey-Brown-Light Grey	**1.20**		
	Silty			
	Root Zone			
	Moist			
	Firm-Stiff			
	No Hydrocarbon Odour or Staining			
		1.50	*	Soil Sample No: BH8-1.5
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 12**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 9

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Silty Clay				
	Brick Fragments, Coal Fragments,			*	Soil Sample No: BH9-0.1
	Ballast & Root Zone (Upper 200mm)				Contamination Ranking = 2/A PID = 0ppm
	Moist				
	Medium Dense				
	No Hydrocarbon Odour or Staining				
				*	Soil Sample No: BH9-0.5
					Contamination Ranking = 2/A PID = 0ppm
				*	Soil Sample No: BH9-1.0
					Contamination Ranking = 2/A PID = 0ppm
		1.50		*	Soil Sample No: BH9-1.5
	End of Environmental Borehole				Contamination Ranking = 2/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 13**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 10

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Root Zone			*	Soil Sample No: BH10-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
		0.30			
Silt (ML)	Dark Grey-Grey				
	Clay				
	Root Zone				
	Moist			*	Soil Sample No: BH10-0.5
	Medium Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining	**0.60**			
Clay (CL)	Light Grey-Grey-Brown				
	Silty				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH10-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 14**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 11

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Grey	**0.00**			
	Clayey Silt				
	Root Zone			*	Soil Sample No: BH11-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense	**0.20**			
	No Hydrocarbon Odour or Staining				
Silt (ML)	Dark Grey-Grey				
	Clay				
	Root Zone				
	Moist			*	Soil Sample No: BH11-0.5
	Medium Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining	**0.60**			
Clay (CL)	Light Grey-Grey-Brown				
	Silty				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH11-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 15**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 12

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Root Zone			*	Soil Sample No: BH12-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense	**0.20**			
	No Hydrocarbon Odour or Staining				
Silt (ML)	Dark Grey-Grey				
	Clay				
	Root Zone				
	Moist	**0.50**		*	Soil Sample No: BH12-0.5
	Medium Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Grey-Brown				
	Silty with Peat				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH12-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 16**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 13

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Silt (ML)	Grey-Light Grey	**0.00**			
	Clay with Peat				
	Root Zone			*	Soil Sample No: BH13-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense-Dense				
	No Hydrocarbon Odour or Staining				
		0.50		*	Soil Sample No: BH13-0.5
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 17**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 14

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Silt (ML)	Dark Grey	**0.00**			
	Clay with Peat				
	Root Zone			*	Soil Sample No: BH14-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
		0.30			
Clay (CL)	Grey-Brown				
	Silty				
	Moist				
	Stiff	**0.50**		*	Soil Sample No: BH14-0.5
	No Hydrocarbon Odour or Staining				Contamination Ranking = 0/A PID = 0ppm
	End of Environmental Borehole				

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 18**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 15

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Silt (ML)	Grey	**0.00**			
	Clay with Peat				
	Root Zone			*	Soil Sample No: BH15-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
		0.50		*	Soil Sample No: BH15-0.5
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 19**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

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Location: Woolamai to Nyora Rail Trail **Borehole** 16

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Gravel			*	Soil Sample No: BH16-0.1
	Root Zone				Contamination Ranking = 1/A PID = 0ppm
	Moist	**0.20**			
	Medium Dense				
	No Hydrocarbon Odour or Staining				
Fill	Dark Grey	**0.40**			
	Clayey Silty Sand				
	Gravel			*	Soil Sample No: BH16-0.5
	Root Zone				Contamination Ranking = 0/A PID = 0ppm
	Moist				
	Medium Dense				
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Brown-Grey				
	Silty				
	Root Zone				
	Moist				
	Stiff	**1.00**		*	Soil Sample No: BH16-1.0
	No Hydrocarbon Odour or Staining				Contamination Ranking = 0/A PID = 0ppm
					Blind C and Duplicate Retrieved
	End of Environmental Borehole				

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 20**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 17

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Root Zone			*	Soil Sample No: BH17-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense	**0.20**			
	No Hydrocarbon Odour or Staining				
Fill	Dark Grey				
	Clayey Silty Sand	**0.40**			
	Gravel				
	Root Zone			*	Soil Sample No: BH17-0.5
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense	**0.60**			
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Brown-Grey				
	Silty				
	Root Zone				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
	End of Environmental Borehole				

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 21**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 18

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Root Zone and Gravel	**0.10**		*	Soil Sample No: BH18-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Brown				
	Silty with Peat				
	Root Zone				
	Moist			*	Soil Sample No: BH18-0.5
	Stiff				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
	End of Environmental Borehole				
		1.00		*	Soil Sample No: BH18-1.0
					Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 22**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 19

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Grey	**0.00**		
	Clayey Silt			
	Root Zone, Ballast and Gravel		*	Soil Sample No: BH19-0.1
	Moist			Contamination Ranking = 1/A PID = 0ppm
	Medium Dense			
	No Hydrocarbon Odour or Staining			
		0.30		
Clay (CL)	Light Grey-Brown			
	Silty with Peat			
	Root Zone			
	Moist		*	Soil Sample No: BH19-0.5
	Stiff			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
		1.00	*	Soil Sample No: BH19-1.0
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 23**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 20

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Dark Grey	**0.00**			
	Clayey Silt				
	Root Zone	**0.10**		*	Soil Sample No: BH20-0.1
	Moist				Contamination Ranking = 0/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
		0.30			
Silt (ML)	Dark grey-Grey				
	Clay				
	Root Zone				
	Moist			*	Soil Sample No: BH20-0.5
	Dense				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Brown				
	Silty				
	Root Zone				
	Moist				
	Stiff				
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH20-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm
					Blind D and Duplicate Retrieved

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 24**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
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SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 21

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests	Results
Fill	Grey	**0.00**		
	Silty Clay			
	Root Zone and Gravel		*	Soil Sample No: BH21-0.1
	Moist			Contamination Ranking = 1/A PID = 0ppm
	Medium Dense	**0.20**		
	No Hydrocarbon Odour or Staining			
Clay (CL)	Light Grey-Brown			
	Silty with Peat			
	Root Zone			
	Moist		*	Soil Sample No: BH21-0.5
	Firm-Stiff			Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining			
		1.00	*	Soil Sample No: BH21-1.0
	End of Environmental Borehole			Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 25**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

Location: Woolamai to Nyora Rail Trail **Borehole** 22

Job No. 123072 E1 **Date:** Dec '24

Ground Water: NIL

Soil Type	Description	Depth	Tests		Results
Fill	Grey	**0.00**			
	Clayey Silt				
	Root Zone and Gravel	**0.10**		*	Soil Sample No: BH22-0.1
	Moist				Contamination Ranking = 1/A PID = 0ppm
	Medium Dense				
	No Hydrocarbon Odour or Staining				
Clay (CL)	Light Grey-Brown				
	Silty with Peat				
	Root Zone				
	Moist			*	Soil Sample No: BH22-0.5
	Soft-Firm				Contamination Ranking = 0/A PID = 0ppm
	No Hydrocarbon Odour or Staining				
		1.00		*	Soil Sample No: BH22-1.0
	End of Environmental Borehole				Contamination Ranking = 0/A PID = 0ppm

+ Standard Penetration Test - N blows/150mm. incr.	c Apparent Cohesion	L.L. Liquid Limit	**Figure 26**
I Undisturbed Sample - Diameter Stated	Ø Friction Angle	P.L. Plastic Limit	
s Vane Shear Strength	P Wet Density	P.I. Plasticity Index	
p Pocket Penetrometer Resistance	w Moisture Content	L.S. Linear Shrinkage	

APPENDIX B

Site Photographs

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 1 facing north-east - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	1

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 2 facing north-west - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	2

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 3 facing east to south-east - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	3

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 3 facing north - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	4

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 4 facing west - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	5

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 6 facing north-east - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	6

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

JOB:	Proposed Woolamai to Nyora Rail Trail	Job No.	123072 E1
		Date	12 December 24



Photograph taken at Borehole 6 facing south-west - Woolamai	Created by: R. Summerville	Figure
	Checked by: T. Holt	7

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 8 facing north-east - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	8

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 8 facing east - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	9

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

JOB:	Proposed Woolamai to Nyora Rail Trail	Job No.	123072 E1
		Date	12 December 24



Photograph taken at Borehole 9 facing north-east - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	10

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 11 facing south - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	11

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 12 facing south-west - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	12

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 3 facing west - Glen Forbes	Created by: R. Summerville	Figure
	Checked by: T. Holt	13

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken west of Borehole 14 facing north-east - Kernot	Created by: R. Summerville	Figure
	Checked by: T. Holt	14

A.S.JAMES
GEOTECHNICAL ENGINEERS
SINCE 1963

JOB:	Proposed Woolamai to Nyora Rail Trail	Job No.	123072 E1
		Date	12 December 24



Photograph taken west of Borehole 14 facing east - Kernot	Created by: R. Summerville	Figure
	Checked by: T. Holt	15

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 14 facing south - Kernot	Created by: R. Summerville	Figure
	Checked by: T. Holt	16

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 18 facing south-west - Woodleigh	Created by: R. Summerville	Figure
	Checked by: T. Holt	17

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 18 facing north - Woodleigh	Created by: R. Summerville	Figure
	Checked by: T. Holt	18

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 18 facing west to north-west - Woodleigh	Created by: R. Summerville	Figure
	Checked by: T. Holt	19

A.S.JAMES GEOTECHNICAL ENGINEERS SINCE 1963	JOB: Proposed Woolamai to Nyora Rail Trail	Job No. 123072 E1
		Date 12 December 24



Photograph taken at Borehole 22 facing south-west - Woodleigh	Created by: R. Summerville	Figure
	Checked by: T. Holt	20

APPENDIX C

Laboratory Certificates and Chain of Custody Information

CHAIN OF CUSTODY
ALS Water Resources Group
ABN: 94 105 060 320

Page……..of…1……

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Geelong Office:
49 Carr Street,
Geelong VIC 3220
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Fax: 03 5229 0242
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Wangaratta Office:
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Traralgon Office
4/55 Hazelwood Rd,
PO Box 1469
Traralgon VIC 3844
Phone:03 5176 4170
Fax: 03 5176 4473
Email:

Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH1-0.1	MK	SOIL	2	10/12/24											
BH1-0.5	MK	SOIL	2	10/12/24			X		X						
BH1-1.0	MK	SOIL	2	10/12/24											
BH2-0.1	MK	SOIL	2	10/12/24				X		X					
BH2-0.5	MK	SOIL	2	10/12/24											
BH2-1.0	MK	SOIL	2	10/12/24											
BH3-0.1	MK	SOIL	2	10/12/24			X		X						
BH3-0.5	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

This form is for recording of sample data after prior consultation with an analyst regarding sampling procedures and does not over-ride pricing agreements, OHS requirements and our terms and conditions.

As an Occupational Health and Safety consideration, it is a requirement of ALS Water Resources Group that all samples received be undamaged and prior advice given in writing of any potential health risks.

LAB USE ONLY

Sample conditions: **Samples received undamaged [Yes/No]**
Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

CHAIN OF CUSTODY
ALS Water Resources Group
ABN: 94 105 060 320

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Traralgon Office
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Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH3-1.0	MK	SOIL	2	10/12/24											
BH4-0.1	MK	SOIL	2	10/12/24				X		X					
BH4-0.5	MK	SOIL	2	10/12/24											
BH4-1.0	MK	SOIL	2	10/12/24											
BH5-0.1	MK	SOIL	2	10/12/24				X	X	X	X				
BH5-0.5	MK	SOIL	2	10/12/24											
BH5-1.0	MK	SOIL	2	10/12/24				X			X				
BH6-0.1	MK	SOIL	2	10/12/24			X								

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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LAB USE ONLY

Sample conditions: **Samples received undamaged [Yes/No]**
Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

CHAIN OF CUSTODY
ALS Water Resources Group
ABN: 94 105 060 320

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Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH6-0.5	MK	SOIL	2	10/12/24											
BH6-1.0	MK	SOIL	2	10/12/24											
BH7-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH7-0.5	MK	SOIL	2	10/12/24											
BH7-1.0	MK	SOIL	2	10/12/24											
BH8-0.1	MK	SOIL	2	10/12/24			X		X						
BH8-0.5	MK	SOIL	2	10/12/24											
BH8-1.0	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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ABN: 94 105 060 320

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Email:

Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH8-1.5	MK	SOIL	2	10/12/24											
BH9-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH9-0.5	MK	SOIL	2	10/12/24											
BH9-1.0	MK	SOIL	2	10/12/24				X							
BH9-1.5	MK	SOIL	2	10/12/24											
BH10-0.1	MK	SOIL	2	10/12/24				X		X	X				
BH10-0.5	MK	SOIL	2	10/12/24											
BH10-1.0	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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LAB USE ONLY

Sample conditions: **Samples received undamaged [Yes/No]**
Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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Email:

Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH11-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH11-0.5	MK	SOIL	2	10/12/24											
BH11-1.0	MK	SOIL	2	10/12/24											
BH12-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH12-0.5	MK	SOIL	2	10/12/24											
BH12-1.0	MK	SOIL	2	10/12/24											
BH13-0.1	MK	SOIL	2	10/12/24				X	X	X	X				
BH13-0.5	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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Rory Summerville	A.S. James	11th of December 2024					

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Sample conditions: **Samples received undamaged [Yes/No]**
Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH14-0.1	MK	SOIL	2	10/12/24				X		X					
BH14-0.5	MK	SOIL	2	10/12/24											
BH15-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH15-0.5	MK	SOIL	2	10/12/24											
BH16-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH16-0.5	MK	SOIL	2	10/12/24											
BH16-1.0	MK	SOIL	2	10/12/24											
BH17-0.1	MK	SOIL	2	10/12/24			X		X		X				

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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Rory Summerville	A.S. James	11th of December 2024					

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Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH17-0.5	MK	SOIL	2	10/12/24											
BH18-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH18-0.5	MK	SOIL	2	11/12/24											
BH18-1.0	MK	SOIL	2	11/12/24											
BH19-0.1	MK	SOIL	2	11/12/24			X		X		X				
BH19-0.5	MK	SOIL	2	11/12/24				X			X				
BH19-1.0	MK	SOIL	2	11/12/24											
BH20-0.1	MK	SOIL	2	11/12/24				X		X					

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH20-0.5	MK	SOIL	2	11/12/24											
BH20-1.0	MK	SOIL	2	11/12/24				X							
BH21-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH21-0.5	MK	SOIL	2	11/12/24											
BH21-1.0	MK	SOIL	2	11/12/24											
BH22-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH22-0.5	MK	SOIL	2	11/12/24											
BH22-1.0	MK	SOIL	2	11/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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Rory Summerville	A.S. James	11th of December 2024					

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Samples transported at appropriate temperature [Yes/No]

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Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
Blind A	MK	SOIL	1	10/12/24								X			
Blind B	MK	SOIL	1	10/12/24								X			
Blind C	MK	SOIL	1	10/12/24											
Blind D	MK	SOIL	1	11/12/24								X			
ASJRF1	MK	SOIL	1	10/12/24									X		
ASJRF2	MK	SOIL	3	10/12/24										X	

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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A.S James Pty Ltd
ASJAMES
24-73137
24-73137
TAT: 5

Customer Reference: 123072 E1
Due Date: 18/12/2024

24-93137

Client:	**A.S JAMES PTY. LTD.**		
Contact:	**Rory Summerville**		
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811	**Fax:**	95475393
Email:	rorys@asjames.com.au		
P/O No.:		**Quote No.:**	SC/230/17
T/A Time:	5 Day		

Job Ref: 123072 E1

TESTS REQUIRED

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH1-0.1	MK	SOIL	2	10/12/24											
BH1-0.5	MK	SOIL	2	10/12/24			X		X						
BH1-1.0	MK	SOIL	2	10/12/24											
BH2-0.1	MK	SOIL	2	10/12/24				X		X					
BH2-0.5	MK	SOIL	2	10/12/24											
BH2-1.0	MK	SOIL	2	10/12/24											
BH3-0.1	MK	SOIL	2	10/12/24			X		X						
BH3-0.5	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

2°C

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Rory Summerville	A.S. James	11th of December 2024		MK	ALS	11/12	15:-

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Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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BH3-1.0	MK	SOIL	2	10/12/24											
BH4-0.1	MK	SOIL	2	10/12/24				X		X					
BH4-0.5	MK	SOIL	2	10/12/24											
BH4-1.0	MK	SOIL	2	10/12/24											
BH5-0.1	MK	SOIL	2	10/12/24				X	X	X	X				
BH5-0.5	MK	SOIL	2	10/12/24											
BH5-1.0	MK	SOIL	2	10/12/24				X			X				
BH6-0.1	MK	SOIL	2	10/12/24			X								

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Roy Summerville	A.S. James	11th of December 2024					

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Traralgon Office
4/55 Hazelwood Rd,
PO Box 1469
Traralgon VIC 3844
Phone:03 5176 4170
Fax: 03 5176 4473
Email:

Client:	**A.S JAMES PTY. LTD.**	**Job Ref:**	**123072 E1**
Contact:	**Rory Summerville**	**TESTS REQUIRED**	
Address:	**15 LIBBETT AVENUE, CLAYTON SOUTH, VIC, 3169**		
Phone:	9547 4811 **Fax:** 95475393		
Email:	rorys@asjames.com.au		
P/O No.:	**Quote No.:** SC/230/17		
T/A Time:	5 Day		

Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH6-0.5	MK	SOIL	2	10/12/24											
BH6-1.0	MK	SOIL	2	10/12/24											
BH7-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH7-0.5	MK	SOIL	2	10/12/24											
BH7-1.0	MK	SOIL	2	10/12/24											
BH8-0.1	MK	SOIL	2	10/12/24			X		X						
BH8-0.5	MK	SOIL	2	10/12/24											
BH8-1.0	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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Samples adequately preserved [Yes/No]
Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

CHAIN OF CUSTODY
ALS Water Resources Group
ABN: 94 105 060 320

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Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH8-1.5	MK	SOIL	2	10/12/24											
BH9-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH9-0.5	MK	SOIL	2	10/12/24											
BH9-1.0	MK	SOIL	2	10/12/24				X							
BH9-1.5	MK	SOIL	2	10/12/24											
BH10-0.1	MK	SOIL	2	10/12/24				X		X	X				
BH10-0.5	MK	SOIL	2	10/12/24											
BH10-1.0	MK	SOIL	2	10/12/24											

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

Relinquished By:	Company:	Date:	Time:	Received By:	Company:	Date:	Time:
Rory Summerville	A.S. James	11th of December 2024					

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Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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P/O No.:	**Quote No.:** SC/230/17		
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Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH11-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH11-0.5	MK	SOIL	2	10/12/24											
BH11-1.0	MK	SOIL	2	10/12/24											
BH12-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH12-0.5	MK	SOIL	2	10/12/24											
BH12-1.0	MK	SOIL	2	10/12/24											
BH13-0.1	MK	SOIL	2	10/12/24				X	X	X	X				
BH13-0.5	MK	SOIL	2	10/12/24											

TESTS REQUIRED

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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Samples within recommended holding times: [Yes/No]
Samples transported at appropriate temperature [Yes/No]

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Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH14-0.1	MK	SOIL	2	10/12/24				X		X					
BH14-0.5	MK	SOIL	2	10/12/24											
BH15-0.1	MK	SOIL	2	10/12/24				X	X	X					
BH15-0.5	MK	SOIL	2	10/12/24											
BH16-0.1	MK	SOIL	2	10/12/24			X		X	X					
BH16-0.5	MK	SOIL	2	10/12/24											
BH16-1.0	MK	SOIL	2	10/12/24											
BH17-0.1	MK	SOIL	2	10/12/24			X		X		X				

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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Sample ID	Sampler	Sample Description	No of Containers	Date Sampled	Time sampled	Matrix	Vic EPA Screen (A-S1-R) / EPA 1828.3 Table 3 Suite*	A-S14-R-19, OCPs & pH*	PFAS	Asbestos (Presence / Absence)	Chloride, Sulfate, OOC and CEC	OCPs	Heavy Metals (19 Metals)*	VOCs	
BH17-0.5	MK	SOIL	2	10/12/24											
BH18-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH18-0.5	MK	SOIL	2	11/12/24											
BH18-1.0	MK	SOIL	2	11/12/24											
BH19-0.1	MK	SOIL	2	11/12/24			X		X		X				
BH19-0.5	MK	SOIL	2	11/12/24				X			X				
BH19-1.0	MK	SOIL	2	11/12/24											
BH20-0.1	MK	SOIL	2	11/12/24				X		X					

Special Instructions: * Heavy Metals (19 Metals) – Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Tin + Zinc

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BH20-0.5	MK	SOIL	2	11/12/24											
BH20-1.0	MK	SOIL	2	11/12/24				X							
BH21-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH21-0.5	MK	SOIL	2	11/12/24											
BH21-1.0	MK	SOIL	2	11/12/24											
BH22-0.1	MK	SOIL	2	11/12/24			X		X	X					
BH22-0.5	MK	SOIL	2	11/12/24											
BH22-1.0	MK	SOIL	2	11/12/24											

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Blind A	MK	SOIL	1	10/12/24								X			
Blind B	MK	SOIL	1	10/12/24								X			
Blind C	MK	SOIL	1	10/12/24											
Blind D	MK	SOIL	1	11/12/24								X			
ASJRF1	MK	SOIL	1	10/12/24									X		
ASJRF2	MK	SOIL	3	10/12/24										X	

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ALS Water
ALS Water and Hydrographics Pty Ltd ABN: 94 105 060 320
Caribbean Business Park, 22 Dalmore Drive, Scoresby, VIC 3179
www.alsglobal.com

Sample Receipt Advice (SRA)

Client:	**Client Contact:**	**Rory Summerville**
AS James Pty Ltd	Phone :	9547 4811
15 Libbett Avenue	Mobile :	0400 693 037
CLAYTON SOUTH	Fax :	9547 5393
VIC 3169 AUSTRALIA	Email :	rorys@asjames.com.au

Batch Summary: **ALS Water Batch No :** **24-73137**

Date Received :	11-Dec-2024
Scheduled Reporting Date :	18-Dec-2024
Client Job Ref :	123072 E1
No. of Sample(s) :	70
Program :	Miscellaneous Analysis
Purchase Order :	n/a
NATA report :	Reqd.
Lab. Contact :	**Tuyen Nguyen**
	Phone: 03 87568000
	Tuyen.Nguyen@alsglobal.com

Please direct any enquries you have regarding this project to the above ALS Water contact .

Delivery Details:

COC Received : YES

☑ Sample Temperature on Receipt. 2 C°

☑ Samples preserved where applicable #

Comments:

Disclaimer : This document contains privileged and confidential information intended only for the use of the addressee. If you are not the addressee, you are hereby notified that you must not disseminate, copy or take action of its contents. If you have received this document in error, please notify the ALS Water immediately.

Comparisons are made against pretreatment/preservation as per AS,VICEPA,APHA,USEPA standards

Client:

AS James Pty Ltd

15 Libbett Avenue
CLAYTON SOUTH
VIC 3169 AUSTRALIA

Client Contact: **Rory Summerville**

Phone : 9547 4811
Mobile : 0400 693 037
Fax : 9547 5393
Email : rorys@asjames.com.au

Summary of Sample and Received Analysis:

ALS Sample	Sample Name	Date	Test Count
10605886	BH1-0.5	10/12/2024	20
10605888	BH2-0.1	10/12/2024	9
10605891	BH3-0.1	10/12/2024	20
10605894	BH4-0.1	10/12/2024	9
10605897	BH5-0.1	10/12/2024	14
10605899	BH5-1.0	10/12/2024	13
10605900	BH6-0.1	10/12/2024	17
10605903	BH7-0.1	10/12/2024	18
10605906	BH8-0.1	10/12/2024	18
10605910	BH9-0.1	10/12/2024	18
10605912	BH9-1.0	10/12/2024	9
10605914	BH10-0.1	10/12/2024	13
10605917	BH11-0.1	10/12/2024	10
10605920	BH12-0.1	10/12/2024	10
10605923	BH13-0.1	10/12/2024	14
10605925	BH14-0.1	10/12/2024	9
10605927	BH15-0.1	10/12/2024	10
10605929	BH16-0.1	10/12/2024	18
10605932	BH17-0.1	10/12/2024	22
10605934	BH18-0.1	10/12/2024	18
10605938	BH19-0.1	10/12/2024	22
10605939	BH19-0.5	10/12/2024	13
10605941	BH20-0.1	10/12/2024	9
10605943	BH20-1.0	10/12/2024	9
10605944	BH21-0.1	10/12/2024	18
10605947	BH22-0.1	10/12/2024	18
10605950	Blind A	10/12/2024	2
10605951	Blind B	10/12/2024	2

Disclaimer : This document contains privileged and confidential information intended only for the use of the addressee. If you are not the addressee, you are hereby notified that you must not disseminate, copy or take action of its contents. If you have received this document in error, please notify the ALS Water immediately.

Comparisons are made against pretreatment/preservation as per AS,VICEPA,APHA,USEPA standards

Client:	Client Contact:	Rory Summerville
AS James Pty Ltd	Phone :	9547 4811
	Mobile :	0400 693 037
15 Libbett Avenue	Fax :	9547 5393
CLAYTON SOUTH	Email :	rorys@asjames.com.au
VIC 3169 AUSTRALIA		

			Test Count
10605953	Blind D	10/12/2024	2
10605954	ASJRF 1	10/12/2024	1
10605955	ASJRF 2	10/12/2024	3

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Comparisons are made against pretreatment/preservation as per AS,VICEPA,APHA,USEPA standards

Accreditation No. 992
Accredited for compliance with
ISO/IEC 17025 - Testing

CERTIFICATE OF ANALYSIS

Batch No: **24-73137**

Replacement Report 242283

This report replaces Report Number: **239723**

Client: **AS James Pty Ltd**

Contact: **Rory Summerville**

Address: 15 Libbett Avenue
CLAYTON SOUTH
VIC 3169
AUSTRALIA

Client Program Ref: **123072 E1**

ALS Program Ref: **ASJAMES**

PO No: **Not Available**

Laboratory Scoresby Laboratory

Address Caribbean Business Park,
22 Dalmore Drive,
Scoresby,
VIC 3179

Phone 03 8756 8000

Fax 03 9763 1862

Contact: Tuyen Nguyen
Client Manager
Tuyen.Nguyen@alsglobal.com

Date Sampled: 10-Dec-2024

Date Samples Received: 11-Dec-2024

Date Issued: **08-Jan-2025**

The hash (#) below indicates methods not covered by NATA accreditation in the performance of this service .

Analysis	Method	Laboratory	Analysis		Method	Laboratory	Analysis	Method	Laboratory
CEC	WD003	Scoresby	**CHC**		WP084	Scoresby			
Chloride	WD045G	Scoresby	**Cyanide**		WK026SF	Scoresby			
PFAS	EP231X	Scoresby	**Total Fluoride**		QWI-EN. WK040T	Scoresby			
HVOL	WP074	Scoresby	**MAH**		WP125 & WP074	Scoresby			
MS Total Metals	WG020B	Scoresby	**OCP**		WP068A	Scoresby			
OOC	WP004	Scoresby	**PAH**		WP075B	Scoresby			
PCB	WP066	Scoresby	**pH**		EA002	Scoresby			
Phenols(Halo)	WP075A	Scoresby	**Phenols(NonHalo)**		WP075A	Scoresby			
SO4	WD041G	Scoresby	**CHC Sum**		WP084	Scoresby			
Total Cr 6+ DA	EG048G	Scoresby	**TRH F2**	#	WP071	Scoresby			
TRH & TPH (>C10)	WP071	Scoresby	**TRH (C6-C10) & F1**		WP074 (F1 not NATA)	Scoresby			
HVOL	WP074	Scoresby	**MAH**		EP125A	Scoresby			

MS Total Metals	WG020A	Scoresby	**SOLVENTS**	WP125A	Scoresby
Asbestos	EA200	ALS Melbourne			

Asbestos analysis conducted at ALS Springvale. 4 Westall Rd Springvale VIC 3170. The results may be found in their Work Order: EM2422187. NATA Accredited Laboratory Number: 825.

Please note:

			Asbestos
10605888	10-12-24	BH2-0.1 is the same as #10606000	Not Detected
10605894	10-12-24	BH4-0.1 is the same as #10606021	Not Detected
10605897	10-12-24	BH5-0.1 is the same as #10606025	Not Detected
10605903	10-12-24	BH7-0.1 is the same as #10606036	Not Detected
10605910	10-12-24	BH9-0.1 is the same as #10606039	Not Detected
10605914	10-12-24	BH10-0.1 is the same as #10606042	Not Detected
10605917	10-12-24	BH11-0.1 is the same as #10606045	Not Detected
10605920	10-12-24	BH12-0.1 is the same as #10606048	Not Detected
10605923	10-12-24	BH13-0.1 is the same as #10606054	Not Detected
10605925	10-12-24	BH14-0.1 is the same as #10606060	Not Detected
10605927	10-12-24	BH15-0.1 is the same as #10606064	Not Detected
10605929	10-12-24	BH16-0.1 is the same as #10606068	Not Detected
10605934	10-12-24	BH18-0.1 is the same as #10606071	Not Detected
10605941	10-12-24	BH20-0.1 is the same as #10606075	Not Detected
10605944	10-12-24	BH21-0.1 is the same as #10606078	Not Detected
10605947	10-12-24	BH22-0.1 is the same as #10606080	Not Detected

Please note that this is an amended report replacing the one originally sent on 26/12/2024. The amendment involves reporting OCPs & pH for sample BH6-0.1, BH7-0.1, BH8-0.1, BH9-0.1, BH16-0.1, BH17-0.1, BH18-0.1, BH19-0.1, BH21-0.1 & BH22-0.1 as previously not reported on the original report. Amendments were made by Tuyen Nguyen on 08/01/2025.

Measurement Uncertainties values for your compliance results are available at this link

Signatories

Name	*Title*	*Name*	*Title*
Alan Chung	**Team Leader Metals**	**Amanda Harcourt**	**Technical Assistant**
Hoa T. Nguyen	**Analyst**	**Joseph De Alwis**	**Analyst**
Kosta Christopoulos	**Team Leader Organics**	**Mathew Fordham**	**Chemist/Analyst**
Thanh U. Nguyen	**Analyst**	**Suresh Sundaramoorthy**	**Chemist**
Tuyen Nguyen	**Client Manager**		

Results contained within this report relate only to the samples tested. The report shall not be reproduced, except in full.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Analysis

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	Total Fluoride FLUORIDE_SED mg/kg	pH PH_SED Units	Cyanide CYANIDE mg/kg	OOC OOC %	Chloride S-CHLORIDE(DA) mg/kg	SO4 S-SO4-DA mg/kg	CEC S-CEC meq/100g	Total Cr 6+ DA TOTAL CHROMIUM 6 + mg/kg
10605886	10-12-24	BH1-0.5	SOIL	110	7.1	<5					<1
10605888	10-12-24	BH2-0.1	SOIL		6.2						
10605891	10-12-24	BH3-0.1	SOIL	150	6.0	<5					<1
10605894	10-12-24	BH4-0.1	SOIL		6.0						
10605897	10-12-24	BH5-0.1	SOIL		5.4		0.2	1100	160	10	
10605899	10-12-24	BH5-1.0	SOIL		5.4		<0.1	730	<250 LINT	11	
10605900	10-12-24	BH6-0.1	SOIL	140	6.1	<5					<1
10605903	10-12-24	BH7-0.1	SOIL	190	5.8	<5					<1
10605906	10-12-24	BH8-0.1	SOIL	170	6.6	<5					<1
10605910	10-12-24	BH9-0.1	SOIL	180	5.9	<5					<1
10605912	10-12-24	BH9-1.0	SOIL		6.7						
10605914	10-12-24	BH10-0.1	SOIL		6.0		3.3	16	<25 LINT	12	
10605917	10-12-24	BH11-0.1	SOIL		6.0						
10605920	10-12-24	BH12-0.1	SOIL		5.7						
10605923	10-12-24	BH13-0.1	SOIL		4.9		1.8	30	<100 LINT	8.1	
10605925	10-12-24	BH14-0.1	SOIL		5.6						
10605927	10-12-24	BH15-0.1	SOIL		4.9						
10605929	10-12-24	BH16-0.1	SOIL	150	5.8	<5					<1
10605932	10-12-24	BH17-0.1	SOIL	160	6.0	<5	4.4	9	<50 LINT	13	<1
10605934	10-12-24	BH18-0.1	SOIL	190	5.8	<5					<1
10605938	10-12-24	BH19-0.1	SOIL	190	6.0	<5	4.5	37	<50 LINT	13	<1
10605939	10-12-24	BH19-0.5	SOIL		6.2		0.9	64	<50 LINT	6.3	
10605941	10-12-24	BH20-0.1	SOIL		5.4						
10605943	10-12-24	BH20-1.0	SOIL		5.5						
10605944	10-12-24	BH21-0.1	SOIL	160	5.4	<5					<1
10605947	10-12-24	BH22-0.1	SOIL	150	6.0	<5					<1

LINT Level of Reporting raised due to interferences in the sample matrix

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Metals

Sample	Sampled Date	Your Ref	Analysis:	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals
			Component:	SB	AS	BA	BE	B	CD	CR	CO
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<5	56	10	<5	<10	<0.2	<5	<5
10605888	10-12-24	BH2-0.1	SOIL	<5	<5	60	<5	<10	<0.2	<5	<5
10605891	10-12-24	BH3-0.1	SOIL	<5	7	46	<5	<10	<0.2	10	<5
10605894	10-12-24	BH4-0.1	SOIL	<5	42	56	<5	<10	0.4	15	<5
10605897	10-12-24	BH5-0.1	SOIL	<5	6	29	<5	<10	<0.2	<5	<5
10605899	10-12-24	BH5-1.0	SOIL	<5	<5	53	<5	<10	<0.2	<5	<5
10605900	10-12-24	BH6-0.1	SOIL	<5	140	91	<5	12	<0.2	24	7
10605903	10-12-24	BH7-0.1	SOIL	<5	<5	40	<5	<10	<0.2	6	<5
10605906	10-12-24	BH8-0.1	SOIL	<5	210	40	<5	<10	<0.2	34	10
10605910	10-12-24	BH9-0.1	SOIL	<5	22	35	<5	<10	<0.2	9	8
10605912	10-12-24	BH9-1.0	SOIL	<5	59	53	<5	<10	<0.2	11	9
10605914	10-12-24	BH10-0.1	SOIL	<5	13	73	<5	<10	<0.2	9	11
10605917	10-12-24	BH11-0.1	SOIL	<5	9	38	<5	<10	<0.2	5	8
10605920	10-12-24	BH12-0.1	SOIL	<5	<5	48	<5	<10	<0.2	<5	7
10605923	10-12-24	BH13-0.1	SOIL	<5	<5	11	<5	<10	<0.2	<5	<5
10605925	10-12-24	BH14-0.1	SOIL	<5	58	17	<5	<10	<0.2	6	<5
10605927	10-12-24	BH15-0.1	SOIL	<5	<5	14	<5	<10	<0.2	<5	<5
10605929	10-12-24	BH16-0.1	SOIL	<5	230	74	<5	<10	<0.2	6	<5
10605932	10-12-24	BH17-0.1	SOIL	<5	84	45	<5	19	<0.2	12	<5
10605934	10-12-24	BH18-0.1	SOIL	<5	8	31	<5	<10	<0.2	11	<5
10605938	10-12-24	BH19-0.1	SOIL	<5	11	33	<5	<10	<0.2	23	7
10605939	10-12-24	BH19-0.5	SOIL	<5	<5	16	<5	<10	<0.2	<5	<5
10605941	10-12-24	BH20-0.1	SOIL	<5	11	57	<5	<10	<0.2	6	<5
10605943	10-12-24	BH20-1.0	SOIL	<5	<5	8	<5	<10	<0.2	<5	<5
10605944	10-12-24	BH21-0.1	SOIL	<5	<5	20	<5	<10	<0.2	<5	<5
10605947	10-12-24	BH22-0.1	SOIL	<5	<5	23	<5	<10	<0.2	<5	<5

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Metals

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	MS Total Metals CU mg/kg	MS Total Metals FE mg/kg	MS Total Metals PB mg/kg	MS Total Metals MN mg/kg	MS Total Metals HG mg/kg	MS Total Metals MO mg/kg	MS Total Metals NI mg/kg	MS Total Metals SE mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<5	1200	<5	11	0.06	<5	<5	<3
10605888	10-12-24	BH2-0.1	SOIL	15	6500	42	250	0.06	<5	5	<3
10605891	10-12-24	BH3-0.1	SOIL	5	4900	18	71	0.07	<5	9	<3
10605894	10-12-24	BH4-0.1	SOIL	21	20000	78	130	0.06	<5	16	<3
10605897	10-12-24	BH5-0.1	SOIL	<5	5800	6	14	<0.05	<5	<5	<3
10605899	10-12-24	BH5-1.0	SOIL	<5	4900	5	12	0.06	<5	<5	<3
10605900	10-12-24	BH6-0.1	SOIL	31	17000	84	220	0.07	<5	34	<3
10605903	10-12-24	BH7-0.1	SOIL	<5	9700	9	63	<0.05	<5	<5	<3
10605906	10-12-24	BH8-0.1	SOIL	32	22000	16	330	0.06	<5	60	<3
10605910	10-12-24	BH9-0.1	SOIL	12	17000	14	270	<0.05	<5	6	<3
10605912	10-12-24	BH9-1.0	SOIL	19	29000	21	290	<0.05	<5	11	<3
10605914	10-12-24	BH10-0.1	SOIL	39	16000	180	1200	0.10	<5	11	<3
10605917	10-12-24	BH11-0.1	SOIL	<5	11000	11	900	<0.05	<5	<5	<3
10605920	10-12-24	BH12-0.1	SOIL	5	10000	15	690	<0.05	<5	<5	<3
10605923	10-12-24	BH13-0.1	SOIL	<5	1800	5	11	<0.05	<5	<5	<3
10605925	10-12-24	BH14-0.1	SOIL	<5	6600	13	27	<0.05	<5	<5	<3
10605927	10-12-24	BH15-0.1	SOIL	<5	3900	10	76	<0.05	<5	<5	<3
10605929	10-12-24	BH16-0.1	SOIL	32	11000	230	260	0.11	<5	7	<3
10605932	10-12-24	BH17-0.1	SOIL	17	11000	18	190	0.08	<5	12	<3
10605934	10-12-24	BH18-0.1	SOIL	11	9900	40	170	0.06	<5	13	<3
10605938	10-12-24	BH19-0.1	SOIL	30	20000	34	230	0.07	<5	32	<3
10605939	10-12-24	BH19-0.5	SOIL	<5	14000	15	79	<0.05	<5	<5	<3
10605941	10-12-24	BH20-0.1	SOIL	13	7000	39	78	<0.05	<5	<5	<3
10605943	10-12-24	BH20-1.0	SOIL	<5	5400	5	14	<0.05	<5	<5	<3
10605944	10-12-24	BH21-0.1	SOIL	<5	4200	11	61	<0.05	<5	<5	<3
10605947	10-12-24	BH22-0.1	SOIL	<5	3600	11	99	<0.05	<5	<5	<3

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Metals

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	MS Total Metals AG mg/kg	MS Total Metals SN mg/kg	MS Total Metals ZN mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<5	<5	<5
10605888	10-12-24	BH2-0.1	SOIL	<5	<5	76
10605891	10-12-24	BH3-0.1	SOIL	<5	<5	13
10605894	10-12-24	BH4-0.1	SOIL	<5	<5	170
10605897	10-12-24	BH5-0.1	SOIL	<5	<5	8
10605899	10-12-24	BH5-1.0	SOIL	<5	<5	5
10605900	10-12-24	BH6-0.1	SOIL	<5	25	35
10605903	10-12-24	BH7-0.1	SOIL	<5	<5	19
10605906	10-12-24	BH8-0.1	SOIL	<5	46	32
10605910	10-12-24	BH9-0.1	SOIL	<5	<5	31
10605912	10-12-24	BH9-1.0	SOIL	<5	<5	40
10605914	10-12-24	BH10-0.1	SOIL	<5	<5	71
10605917	10-12-24	BH11-0.1	SOIL	<5	<5	9
10605920	10-12-24	BH12-0.1	SOIL	<5	<5	22
10605923	10-12-24	BH13-0.1	SOIL	<5	<5	8
10605925	10-12-24	BH14-0.1	SOIL	<5	<5	14
10605927	10-12-24	BH15-0.1	SOIL	<5	<5	13
10605929	10-12-24	BH16-0.1	SOIL	<5	6	80
10605932	10-12-24	BH17-0.1	SOIL	<5	7	16
10605934	10-12-24	BH18-0.1	SOIL	<5	<5	28
10605938	10-12-24	BH19-0.1	SOIL	<5	<5	58
10605939	10-12-24	BH19-0.5	SOIL	<5	<5	8
10605941	10-12-24	BH20-0.1	SOIL	<5	<5	43
10605943	10-12-24	BH20-1.0	SOIL	<5	<5	<5
10605944	10-12-24	BH21-0.1	SOIL	<5	<5	10
10605947	10-12-24	BH22-0.1	SOIL	<5	<5	13

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

MAH

Sample	Sampled Date	Your Ref	Analysis:	MAH	MAH	MAH	MAH	MAH	MAH	MAH
			Component:	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	124TMBENZ
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			Sample Type							
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001

Soil MAH

Sample	Sampled Date	Your Ref	Analysis:	MAH	MAH	MAH	MAH	MAH	MAH	MAH
			Component:	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE/ ISOPROPYL BENZENE/EMB	124-TRIMETHYLBENZENE/TMB
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
			Sample Type							
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil TRH/TPH (Volatile)

Sample	Sampled Date	Your Ref	Analysis:	TRH (C6-C10) & F1	TRH (C6-C10) & F1	TRH (C6-C10) & F1
			Component:	TPH_C6-C9	TRH_C6-C10	TRH_C6-C10 minus BTEX
			Units:	mg/kg	mg/kg	mg/kg
			Sample Type			
10605886	10-12-24	BH1-0.5	SOIL	<20	<20	<20
10605888	10-12-24	BH2-0.1	SOIL	<20	<20	<20
10605891	10-12-24	BH3-0.1	SOIL	<20	<20	<20
10605894	10-12-24	BH4-0.1	SOIL	<20	<20	<20
10605897	10-12-24	BH5-0.1	SOIL	<20	<20	<20
10605899	10-12-24	BH5-1.0	SOIL	<20	<20	<20
10605900	10-12-24	BH6-0.1	SOIL	<20	<20	<20
10605903	10-12-24	BH7-0.1	SOIL	<20	<20	<20
10605906	10-12-24	BH8-0.1	SOIL	<20	<20	<20
10605910	10-12-24	BH9-0.1	SOIL	<20	<20	<20
10605912	10-12-24	BH9-1.0	SOIL	<20	<20	<20
10605914	10-12-24	BH10-0.1	SOIL	<20	<20	<20
10605917	10-12-24	BH11-0.1	SOIL	<20	<20	<20
10605920	10-12-24	BH12-0.1	SOIL	<20	<20	<20
10605923	10-12-24	BH13-0.1	SOIL	<20	<20	<20
10605925	10-12-24	BH14-0.1	SOIL	<20	<20	<20
10605927	10-12-24	BH15-0.1	SOIL	<20	<20	<20
10605929	10-12-24	BH16-0.1	SOIL	<20	<20	<20
10605932	10-12-24	BH17-0.1	SOIL	<20	<20	<20
10605934	10-12-24	BH18-0.1	SOIL	<20	<20	<20
10605938	10-12-24	BH19-0.1	SOIL	<20	<20	<20
10605939	10-12-24	BH19-0.5	SOIL	<20	<20	<20
10605941	10-12-24	BH20-0.1	SOIL	<20	<20	<20
10605943	10-12-24	BH20-1.0	SOIL	<20	<20	<20
10605944	10-12-24	BH21-0.1	SOIL	<20	<20	<20
10605947	10-12-24	BH22-0.1	SOIL	<20	<20	<20

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil TRH/TPH

Sample	Sampled Date	Your Ref	Analysis:	TRH F2	TRH & TPH (>C10)	TRH & TPH (>C10)	TRH & TPH (>C10)	TRH & TPH (>C10)	TRH & TPH (>C10)	TRH & TPH (>C10)	TRH & TPH (>C10)
			Component:	TRH>C10-C16 minus NAP	TPH C10-C14	TPH C15-C28	TPH C29-C36	Sum of TPH C10-C36	TRH>C10-C16	TRH>C16-C34	TRH>C34-C40
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605888	10-12-24	BH2-0.1	SOIL	31	<20	110	210	320	31	260	74
10605891	10-12-24	BH3-0.1	SOIL	<20	<20	<50	92	92	<20	120	<50
10605894	10-12-24	BH4-0.1	SOIL	<20	<20	59	81	140	<20	120	<50
10605897	10-12-24	BH5-0.1	SOIL	<20	<20	<50	54	54	<20	58	<50
10605899	10-12-24	BH5-1.0	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605900	10-12-24	BH6-0.1	SOIL	55	<20	210	220	430	55	380	85
10605903	10-12-24	BH7-0.1	SOIL	<20	<20	<50	110	110	<20	120	<50
10605906	10-12-24	BH8-0.1	SOIL	40	<20	120	110	230	40	210	<50
10605910	10-12-24	BH9-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605912	10-12-24	BH9-1.0	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605914	10-12-24	BH10-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605917	10-12-24	BH11-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605920	10-12-24	BH12-0.1	SOIL	<20	<20	<50	65	65	<20	78	<50
10605923	10-12-24	BH13-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605925	10-12-24	BH14-0.1	SOIL	<20	<20	<50	60	60	<20	53	<50
10605927	10-12-24	BH15-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605929	10-12-24	BH16-0.1	SOIL	<20	<20	75	110	180	<20	170	<50
10605932	10-12-24	BH17-0.1	SOIL	<20	<20	74	69	140	<20	140	<50
10605934	10-12-24	BH18-0.1	SOIL	<20	<20	<50	<50	<50	<20	60	<50
10605938	10-12-24	BH19-0.1	SOIL	<20	<20	<50	140	140	<20	170	<50
10605939	10-12-24	BH19-0.5	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605941	10-12-24	BH20-0.1	SOIL	<20	<20	<50	96	96	<20	130	<50
10605943	10-12-24	BH20-1.0	SOIL	<20	<20	<50	<50	<50	<20	<50	<50
10605944	10-12-24	BH21-0.1	SOIL	<20	<20	<50	63	63	<20	60	<50
10605947	10-12-24	BH22-0.1	SOIL	<20	<20	<50	<50	<50	<20	<50	<50

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil TRH/TPH

Sample	Sampled Date	Your Ref	Analysis:	TRH & TPH (>C10)
			Component:	Sum of TRH>C10-C40
			Units:	mg/kg
			Sample Type	
10605886	10-12-24	BH1-0.5	SOIL	<50
10605888	10-12-24	BH2-0.1	SOIL	360
10605891	10-12-24	BH3-0.1	SOIL	120
10605894	10-12-24	BH4-0.1	SOIL	120
10605897	10-12-24	BH5-0.1	SOIL	58
10605899	10-12-24	BH5-1.0	SOIL	<50
10605900	10-12-24	BH6-0.1	SOIL	520
10605903	10-12-24	BH7-0.1	SOIL	120
10605906	10-12-24	BH8-0.1	SOIL	250
10605910	10-12-24	BH9-0.1	SOIL	<50
10605912	10-12-24	BH9-1.0	SOIL	<50
10605914	10-12-24	BH10-0.1	SOIL	<50
10605917	10-12-24	BH11-0.1	SOIL	<50
10605920	10-12-24	BH12-0.1	SOIL	78
10605923	10-12-24	BH13-0.1	SOIL	<50
10605925	10-12-24	BH14-0.1	SOIL	53
10605927	10-12-24	BH15-0.1	SOIL	<50
10605929	10-12-24	BH16-0.1	SOIL	170
10605932	10-12-24	BH17-0.1	SOIL	140
10605934	10-12-24	BH18-0.1	SOIL	60
10605938	10-12-24	BH19-0.1	SOIL	170
10605939	10-12-24	BH19-0.5	SOIL	<50
10605941	10-12-24	BH20-0.1	SOIL	130
10605943	10-12-24	BH20-1.0	SOIL	<50
10605944	10-12-24	BH21-0.1	SOIL	60
10605947	10-12-24	BH22-0.1	SOIL	<50

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil PAH

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PAH ACENAPHTHENE mg/kg	PAH ACENAPHTHYLENE mg/kg	PAH ANTHRACENE mg/kg	PAH BENZ(A) ANTHRACENE mg/kg	PAH BENZO(A)PYRENE mg/kg	PAH BENZO(B) FLUORANTHENE mg/kg	PAH BENZO(GHI) PERYLENE mg/kg	PAH BENZO(K) FLUORANTHENE mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605888	10-12-24	BH2-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605891	10-12-24	BH3-0.1	SOIL	<0.1	<0.1	0.1	1.9	2.4	2.0	1.6	1.6
10605894	10-12-24	BH4-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605897	10-12-24	BH5-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605899	10-12-24	BH5-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605900	10-12-24	BH6-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605912	10-12-24	BH9-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605914	10-12-24	BH10-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605917	10-12-24	BH11-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605920	10-12-24	BH12-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605923	10-12-24	BH13-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605925	10-12-24	BH14-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605927	10-12-24	BH15-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605932	10-12-24	BH17-0.1	SOIL	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605938	10-12-24	BH19-0.1	SOIL	<0.1	<0.1	<0.1	0.1	0.2	0.1	0.1	0.1
10605939	10-12-24	BH19-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605941	10-12-24	BH20-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605943	10-12-24	BH20-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil PAH

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PAH CHRYSENE mg/kg	PAH DIBENZ(AH) ANTHRACENE mg/kg	PAH FLUORANTHENE mg/kg	PAH FLUORENE mg/kg	PAH INDENO(123-CD) PYRENE mg/kg	PAH NAPHTHALENE mg/kg	PAH PHENANTHRENE mg/kg	PAH PYRENE mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605888	10-12-24	BH2-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605891	10-12-24	BH3-0.1	SOIL	1.9	0.4	1.8	<0.1	1.7	<0.1	0.5	1.8
10605894	10-12-24	BH4-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605897	10-12-24	BH5-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605899	10-12-24	BH5-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605900	10-12-24	BH6-0.1	SOIL	0.1	<0.1	0.3	<0.1	<0.1	0.1	0.2	0.2
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605912	10-12-24	BH9-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605914	10-12-24	BH10-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605917	10-12-24	BH11-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605920	10-12-24	BH12-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605923	10-12-24	BH13-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605925	10-12-24	BH14-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605927	10-12-24	BH15-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605932	10-12-24	BH17-0.1	SOIL	0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.2	0.2
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2
10605938	10-12-24	BH19-0.1	SOIL	0.2	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.3
10605939	10-12-24	BH19-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605941	10-12-24	BH20-0.1	SOIL	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605943	10-12-24	BH20-1.0	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil PAH

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PAH TOTAL PAHS mg/kg	PAH BAP_TEQ_(ZERO) mg/kg	PAH BAP_TEQ_(HALF_LOR) mg/kg	PAH BAP_TEQ_(LOR) mg/kg	PAH p-Terphenyl-d14-SURR %
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	0.1	0.2	95
10605888	10-12-24	BH2-0.1	SOIL	<0.1	<0.1	0.1	0.2	104
10605891	10-12-24	BH3-0.1	SOIL	18	3.6	3.6	3.6	103
10605894	10-12-24	BH4-0.1	SOIL	<0.1	<0.1	0.1	0.2	99
10605897	10-12-24	BH5-0.1	SOIL	<0.1	<0.1	0.1	0.2	99
10605899	10-12-24	BH5-1.0	SOIL	<0.1	<0.1	0.1	0.2	98
10605900	10-12-24	BH6-0.1	SOIL	0.9	<0.1	0.1	0.2	102
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	0.1	0.2	108
10605906	10-12-24	BH8-0.1	SOIL	0.3	<0.1	0.1	0.2	98
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	0.1	0.2	88
10605912	10-12-24	BH9-1.0	SOIL	<0.1	<0.1	0.1	0.2	93
10605914	10-12-24	BH10-0.1	SOIL	<0.1	<0.1	0.1	0.2	97
10605917	10-12-24	BH11-0.1	SOIL	<0.1	<0.1	0.1	0.2	97
10605920	10-12-24	BH12-0.1	SOIL	<0.1	<0.1	0.1	0.2	94
10605923	10-12-24	BH13-0.1	SOIL	<0.1	<0.1	0.1	0.2	98
10605925	10-12-24	BH14-0.1	SOIL	<0.1	<0.1	0.1	0.2	106
10605927	10-12-24	BH15-0.1	SOIL	<0.1	<0.1	0.1	0.2	99
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	0.1	0.2	90
10605932	10-12-24	BH17-0.1	SOIL	0.9	<0.1	0.1	0.2	96
10605934	10-12-24	BH18-0.1	SOIL	0.4	<0.1	0.1	0.2	106
10605938	10-12-24	BH19-0.1	SOIL	1.4	0.2	0.3	0.3	112
10605939	10-12-24	BH19-0.5	SOIL	<0.1	<0.1	0.1	0.2	98
10605941	10-12-24	BH20-0.1	SOIL	0.1	<0.1	0.1	0.2	105
10605943	10-12-24	BH20-1.0	SOIL	<0.1	<0.1	0.1	0.2	96
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	0.1	0.2	98
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	0.1	0.2	96

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil O.C. Pesticides

Sample	Sampled Date	Your Ref	Analysis:	OCP	OCP	OCP	OCP	OCP	OCP	OCP	OCP
			Component:	A-BHC	A-ENDOSULPHAN	ALDRIN	B-BHC	B-ENDOSULPHAN	CHLORDANE	C-CHLORDANE	TRANS-CHLORDANE
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605888	10-12-24	BH2-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605891	10-12-24	BH3-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605894	10-12-24	BH4-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605897	10-12-24	BH5-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605899	10-12-24	BH5-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605900	10-12-24	BH6-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605903	10-12-24	BH7-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605906	10-12-24	BH8-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605910	10-12-24	BH9-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605912	10-12-24	BH9-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605914	10-12-24	BH10-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605917	10-12-24	BH11-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605920	10-12-24	BH12-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605923	10-12-24	BH13-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605925	10-12-24	BH14-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605927	10-12-24	BH15-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605929	10-12-24	BH16-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605932	10-12-24	BH17-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605934	10-12-24	BH18-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605938	10-12-24	BH19-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605939	10-12-24	BH19-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605941	10-12-24	BH20-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605943	10-12-24	BH20-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605944	10-12-24	BH21-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605947	10-12-24	BH22-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605950	10-12-24	Blind A	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605951	10-12-24	Blind B	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605953	10-12-24	Blind D	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil O.C. Pesticides

Sample	Sampled Date	Your Ref	Analysis:	OCP	OCP	OCP	OCP	OCP	OCP	OCP	OCP
			Component:	D-BHC	DDD	DDE	DDT	DIELDRIN	ENDOSULPHAN	ENDOSULFAN SULPHATE	ENDRIN
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605888	10-12-24	BH2-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605891	10-12-24	BH3-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605894	10-12-24	BH4-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605897	10-12-24	BH5-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605899	10-12-24	BH5-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605900	10-12-24	BH6-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605903	10-12-24	BH7-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605906	10-12-24	BH8-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605910	10-12-24	BH9-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605912	10-12-24	BH9-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605914	10-12-24	BH10-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605917	10-12-24	BH11-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605920	10-12-24	BH12-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605923	10-12-24	BH13-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605925	10-12-24	BH14-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605927	10-12-24	BH15-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605929	10-12-24	BH16-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605932	10-12-24	BH17-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605934	10-12-24	BH18-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605938	10-12-24	BH19-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605939	10-12-24	BH19-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605941	10-12-24	BH20-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605943	10-12-24	BH20-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605944	10-12-24	BH21-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605947	10-12-24	BH22-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605950	10-12-24	Blind A	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605951	10-12-24	Blind B	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605953	10-12-24	Blind D	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil O.C. Pesticides

Sample	Sampled Date	Your Ref	Analysis:	OCP	OCP	OCP	OCP	OCP	OCP	OCP	OCP
			Component:	ENDRIN ALDEHYDE	ENDRIN KETONE	HEXACHLOROBENZENE	HEPTACHLOREPOXIDE	HEPTACHLOR	LINDANE	METHOXYCHLOR	OXYCHLORDANE
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605888	10-12-24	BH2-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605891	10-12-24	BH3-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605894	10-12-24	BH4-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605897	10-12-24	BH5-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605899	10-12-24	BH5-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605900	10-12-24	BH6-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605903	10-12-24	BH7-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605906	10-12-24	BH8-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605910	10-12-24	BH9-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605912	10-12-24	BH9-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605914	10-12-24	BH10-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605917	10-12-24	BH11-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605920	10-12-24	BH12-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605923	10-12-24	BH13-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605925	10-12-24	BH14-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605927	10-12-24	BH15-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605929	10-12-24	BH16-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605932	10-12-24	BH17-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605934	10-12-24	BH18-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605938	10-12-24	BH19-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605939	10-12-24	BH19-0.5	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605941	10-12-24	BH20-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605943	10-12-24	BH20-1.0	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605944	10-12-24	BH21-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605947	10-12-24	BH22-0.1	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605950	10-12-24	Blind A	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605951	10-12-24	Blind B	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10605953	10-12-24	Blind D	SOIL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil O.C. Pesticides

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	OCP DDD & DDE & DDT mg/kg	OCP ALDRIN & DIELDRIN mg/kg	OCP 2456-tetrachloro-m-xylene-SURR %
10605886	10-12-24	BH1-0.5	SOIL	<0.05	<0.05	91
10605888	10-12-24	BH2-0.1	SOIL	<0.05	<0.05	93
10605891	10-12-24	BH3-0.1	SOIL	<0.05	<0.05	101
10605894	10-12-24	BH4-0.1	SOIL	<0.05	<0.05	93
10605897	10-12-24	BH5-0.1	SOIL	<0.05	<0.05	95
10605899	10-12-24	BH5-1.0	SOIL	<0.05	<0.05	97
10605900	10-12-24	BH6-0.1	SOIL	<0.05	<0.05	100
10605903	10-12-24	BH7-0.1	SOIL	<0.05	<0.05	110
10605906	10-12-24	BH8-0.1	SOIL	<0.05	<0.05	104
10605910	10-12-24	BH9-0.1	SOIL	<0.05	<0.05	90
10605912	10-12-24	BH9-1.0	SOIL	<0.05	<0.05	92
10605914	10-12-24	BH10-0.1	SOIL	<0.05	<0.05	97
10605917	10-12-24	BH11-0.1	SOIL	<0.05	<0.05	95
10605920	10-12-24	BH12-0.1	SOIL	<0.05	<0.05	91
10605923	10-12-24	BH13-0.1	SOIL	<0.05	<0.05	101
10605925	10-12-24	BH14-0.1	SOIL	<0.05	<0.05	109
10605927	10-12-24	BH15-0.1	SOIL	<0.05	<0.05	97
10605929	10-12-24	BH16-0.1	SOIL	<0.05	<0.05	96
10605932	10-12-24	BH17-0.1	SOIL	<0.05	<0.05	104
10605934	10-12-24	BH18-0.1	SOIL	<0.05	<0.05	110
10605938	10-12-24	BH19-0.1	SOIL	<0.05	<0.05	118
10605939	10-12-24	BH19-0.5	SOIL	<0.05	<0.05	94
10605941	10-12-24	BH20-0.1	SOIL	<0.05	<0.05	101
10605943	10-12-24	BH20-1.0	SOIL	<0.05	<0.05	90
10605944	10-12-24	BH21-0.1	SOIL	<0.05	<0.05	100
10605947	10-12-24	BH22-0.1	SOIL	<0.05	<0.05	106
10605950	10-12-24	Blind A	SOIL	<0.05	<0.05	100
10605951	10-12-24	Blind B	SOIL	<0.05	<0.05	86
10605953	10-12-24	Blind D	SOIL	<0.05	<0.05	105

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil PCBs

Sample	Sampled Date	Your Ref	Analysis:	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB
			Component:	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBS
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605891	10-12-24	BH3-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605900	10-12-24	BH6-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605932	10-12-24	BH17-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605938	10-12-24	BH19-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Soil PCBs

Sample	Sampled Date	Your Ref	Analysis:	PCB
			Component:	2-fluorobiphenyl-SURR
			Units:	%
			Sample Type	
10605886	10-12-24	BH1-0.5	SOIL	94
10605891	10-12-24	BH3-0.1	SOIL	101
10605900	10-12-24	BH6-0.1	SOIL	95
10605903	10-12-24	BH7-0.1	SOIL	82
10605906	10-12-24	BH8-0.1	SOIL	80
10605910	10-12-24	BH9-0.1	SOIL	70
10605929	10-12-24	BH16-0.1	SOIL	78
10605932	10-12-24	BH17-0.1	SOIL	74
10605934	10-12-24	BH18-0.1	SOIL	80
10605938	10-12-24	BH19-0.1	SOIL	80
10605944	10-12-24	BH21-0.1	SOIL	74
10605947	10-12-24	BH22-0.1	SOIL	82

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil CHCs

Sample	Sampled Date	Your Ref	Analysis:	CHC	CHC	CHC	CHC	CHC	CHC	CHC	CHC
			Component:	1234 TETRACHLOROBENZENE	1235 TETRACHLORBENZENE	123 TRICHLOROBENZENE	1245 TETRACHLOROBENZENE	124 TRICHLOROBENZENE	12-DICHLOROBENZENE	135 TRICHLOROBENZENE	13-DICHLOROBENZENE
			Units:								
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605891	10-12-24	BH3-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605900	10-12-24	BH6-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605932	10-12-24	BH17-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605938	10-12-24	BH19-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Soil CHCs

Sample	Sampled Date	Your Ref	Analysis:	CHC	CHC	CHC	CHC	CHC	CHC	CHC	CHC
			Component:	14-DICHLOROBENZENE	2 CHLORONAPHTHALENE	BENZAL CHLORIDE mg/kg	BENZOTRICHLORIDE mg/kg	BENZYLCHLORIDE mg/kg	HEXACHLOROETHANE mg/kg	HEXACHLOROBUTADIENE mg/kg	HEXACHLOROCYCLOPENTADIENE mg/kg
			Units:								
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605891	10-12-24	BH3-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605900	10-12-24	BH6-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605932	10-12-24	BH17-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605938	10-12-24	BH19-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil CHCs

Sample	Sampled Date	Your Ref	Analysis:	CHC	CHC Sum
			Component:	PENTACHLOROBENZENE	CHC SUM
			Units:	mg/kg	mg/kg
			Sample Type		
10605886	10-12-24	BH1-0.5	SOIL	<0.1	<1
10605891	10-12-24	BH3-0.1	SOIL	<0.1	<1
10605900	10-12-24	BH6-0.1	SOIL	<0.1	<1
10605903	10-12-24	BH7-0.1	SOIL	<0.1	<1
10605906	10-12-24	BH8-0.1	SOIL	<0.1	<1
10605910	10-12-24	BH9-0.1	SOIL	<0.1	<1
10605929	10-12-24	BH16-0.1	SOIL	<0.1	<1
10605932	10-12-24	BH17-0.1	SOIL	<0.1	<1
10605934	10-12-24	BH18-0.1	SOIL	<0.1	<1
10605938	10-12-24	BH19-0.1	SOIL	<0.1	<1
10605944	10-12-24	BH21-0.1	SOIL	<0.1	<1
10605947	10-12-24	BH22-0.1	SOIL	<0.1	<1

Phenols (Halogenated)

Sample	Sampled Date	Your Ref	Analysis:	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)	Phenols(Halo)
			Component:	4-CHLORO-3-METHYLPHENOL	2-CHLOROPHENOL	24-DICHLOROPHENOL	26-DICHLOROPHENOL	PENTACHLOROPHENOL	2345 TETRACHLOROPHENOL	2346 TETRACHLOROPHENOL	2356 TETRACHLOROPHENOL
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Phenols (Halogenated)

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	Phenols(Halo) 245-TRICHLOROPHENOL mg/kg	Phenols(Halo) 246-TRICHLOROPHENOL mg/kg	Phenols(Halo) TOTAL PHENOLS (HALOGENATED) mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5

Phenols (Non Halogenated)

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	Phenols(NonHalo) PHENOL mg/kg	Phenols(NonHalo) TOTAL CRESOLS mg/kg	Phenols(NonHalo) 24-DIMETHYL PHENOL mg/kg	Phenols(NonHalo) 24-DINITROPHENOL mg/kg	Phenols(NonHalo) 2-METHYL-46-DINITROPHENOL mg/kg	Phenols(NonHalo) 2-NITROPHENOL mg/kg	Phenols(NonHalo) 4-NITROPHENOL mg/kg	Phenols(NonHalo) 2-CYCLOHEXYL-46-DINITROPHENOL mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<1	<0.5	<30	<10	<0.5	<0.5	<30

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Phenols (Non Halogenated)

Sample	Sampled Date	Your Ref	Sample Type	DINOSEB mg/kg	TOTAL PHENOLS (NON HALOGENATED) mg/kg
			Analysis:	Phenols(NonHalo)	Phenols(NonHalo)
10605886	10-12-24	BH1-0.5	SOIL	<10	<30
10605891	10-12-24	BH3-0.1	SOIL	<10	<30
10605900	10-12-24	BH6-0.1	SOIL	<10	<30
10605903	10-12-24	BH7-0.1	SOIL	<10	<30
10605906	10-12-24	BH8-0.1	SOIL	<10	<30
10605910	10-12-24	BH9-0.1	SOIL	<10	<30
10605929	10-12-24	BH16-0.1	SOIL	<10	<30
10605932	10-12-24	BH17-0.1	SOIL	<10	<30
10605934	10-12-24	BH18-0.1	SOIL	<10	<30
10605938	10-12-24	BH19-0.1	SOIL	<10	<30
10605944	10-12-24	BH21-0.1	SOIL	<10	<30
10605947	10-12-24	BH22-0.1	SOIL	<10	<30

Halo. Volatiles

Sample	Sampled Date	Your Ref	Sample Type	1112TCAN mg/L	1122TCAN mg/L	11DCANE mg/L	11DCENE mg/L	11DCPENE mg/L	123TCPAN mg/L	12DB3CLP mg/L	12DBRANE mg/L
			Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Halo. Volatiles

Sample	Sampled Date	Your Ref	Sample Type	12DCENEC mg/L	12DCENET mg/L	12DCLANE mg/L	12DCLPANE mg/L	13DCLPANE mg/L	13DCLPRC mg/L	13DCLPRT mg/L	22DCPANE mg/L
			Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	2CLTOL	4CLTOL	BCLMANE	BDCMANE	BRBENZ	BROMOFOR	CARTET	CHCL3
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			Sample Type								
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	CHLOBENZ	DBCLMANE	DBMANE	DCM	TCLFMANE	TETCENE	VCL	111TCANE
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			Sample Type								
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.002	<0.001

Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL
			Component:	112TCANE	TRICENE
			Units:	mg/L	mg/L
			Sample Type		
10605955	10-12-24	ASJRF 2	WATER	<0.001	<0.001

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	1112TCAN	1122TCAN	11DCANE	11DCENE	11DCPENE	123TCPAN	12DB3CLP	12DCENEC
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Soil Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	12DCENET	12DCLANE	12DCLPANE	13DCLPANE	13DCLPRC	13DCLPRT	22DCPANE	2CLTOL
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	4CLTOL	BCLMANE	BDCMANE	BRBENZ	BROMOFOR	CARTET	CHCL3	CHLOBENZ
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Soil Halo. Volatiles

Sample	Sampled Date	Your Ref	Analysis:	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL	HVOL
			Component:	DBCLMANE	DBMANE	12DBRANE	DCM	TCLFMANE	TETCENE	VCL	111TCANE
			Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Sample Type								
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	<0.5	<1	<2	<0.5	<1	<0.5

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Soil Halo. Volatiles

Sample	Sampled Date	Your Ref	Sample Type	112TCANE mg/kg	TRICENE mg/kg	Toluene-d8-SURR %	14-Dichloroethane-d4-SURR %
			Analysis:	HVOL	HVOL	HVOL	HVOL
10605886	10-12-24	BH1-0.5	SOIL	<0.5	<0.5	84.55	87.7
10605891	10-12-24	BH3-0.1	SOIL	<0.5	<0.5	82.1	82.3
10605900	10-12-24	BH6-0.1	SOIL	<0.5	<0.5	89.15	90.55
10605903	10-12-24	BH7-0.1	SOIL	<0.5	<0.5	114.65	119.55
10605906	10-12-24	BH8-0.1	SOIL	<0.5	<0.5	63.3	60.45
10605910	10-12-24	BH9-0.1	SOIL	<0.5	<0.5	86.65	89
10605929	10-12-24	BH16-0.1	SOIL	<0.5	<0.5	95.25	91.5
10605932	10-12-24	BH17-0.1	SOIL	<0.5	<0.5	94.85	92.15
10605934	10-12-24	BH18-0.1	SOIL	<0.5	<0.5	124.5	122.2
10605938	10-12-24	BH19-0.1	SOIL	<0.5	<0.5	132.2	133.6
10605944	10-12-24	BH21-0.1	SOIL	<0.5	<0.5	126.6	119.4
10605947	10-12-24	BH22-0.1	SOIL	<0.5	<0.5	118.15	118.55

Solvents

Sample	Sampled Date	Your Ref	Sample Type	ACETONE mg/L	ACRYLONITRILE mg/L	ETHYLHEXYL ACRYLATE mg/L	ISOPROPANOL (ISOPROPYL-ALCOHOL)	METHYLETHYL KETONE mg/L	METHYL ISOBUTYL KETONE mg/L
			Analysis:	SOLVENTS	SOLVENTS	SOLVENTS	SOLVENTS	SOLVENTS	SOLVENTS
10605955	10-12-24	ASJRF 2	WATER	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Metals

Sample	Sampled Date	Your Ref	Sample Type	SB mg/L	AS mg/L	BA mg/L	BE mg/L	B mg/L	CD mg/L	CR mg/L	CO mg/L
			Analysis:	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals
10605954	10-12-24	ASJRF 1	WATER	<0.001	<0.001	<0.001	<0.001	<0.02	<0.0002	<0.001	<0.001

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Metals

Sample	Sampled Date	Your Ref	Analysis:	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals	MS Total Metals
			Component:	CU	FE	PB	MN	HG	MO	NI	SE
			Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
			Sample Type								
10605954	10-12-24	ASJRF 1	WATER	<0.001	<0.01	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001

Metals

Sample	Sampled Date	Your Ref	Analysis:	MS Total Metals	MS Total Metals	MS Total Metals
			Component:	AG	SN	ZN
			Units:	mg/L	mg/L	mg/L
			Sample Type			
10605954	10-12-24	ASJRF 1	WATER	<0.001	<0.001	<0.001

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

PFAS

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PFAS PERFLUOROBUTANE SULFONIC ACID (PFBS)	PFAS PERFLUOROPENTANE SULFONIC ACID (PFPeS)	PFAS PERFLUOROHEXANE SULFONIC ACID (PFHxS)	PFAS PERFLUOROHEPTANE SULFONIC ACID (PFHpS)	PFAS PERFLUOROOCTANE SULFONIC ACID (PFOS)	PFAS PERFLUORODECANE SULFONIC ACID (PFDS)	PFAS PERFLUOROBUTANOIC ACID (PFBA) mg/kg	PFAS PERFLUOROPENTANOIC ACID (PFPeA) mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605891	10-12-24	BH3-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605897	10-12-24	BH5-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605903	10-12-24	BH7-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605906	10-12-24	BH8-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002
10605910	10-12-24	BH9-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605917	10-12-24	BH11-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605920	10-12-24	BH12-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.001	<0.0002
10605923	10-12-24	BH13-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002
10605927	10-12-24	BH15-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	<0.001	<0.0002
10605929	10-12-24	BH16-0.1	SOIL	<0.002 LORR	<0.002 LORR	0.032	<0.002 LORR	0.23	0.042	<0.01 LORR	<0.002 LORR
10605932	10-12-24	BH17-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.001	<0.0002
10605934	10-12-24	BH18-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002
10605938	10-12-24	BH19-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002
10605944	10-12-24	BH21-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002
10605947	10-12-24	BH22-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002

LORR Limit of Reporting has been raised due to high moisture content, insufficient sample or matrix interference.

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

PFAS

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PFAS PERFLUOROHEXANOIC ACID (PFHxA) mg/kg	PFAS PERFLUOROHEPTANOIC ACID (PFHpA) mg/kg	PFAS PERFLUOROOCTANOIC ACID (PFOA) mg/kg	PFAS PERFLUORONONANOIC ACID (PFNA) mg/kg	PFAS PERFLUORODECANOIC ACID (PFDA) mg/kg	PFAS PERFLUOROUNDECANOIC ACID (PFUnDA)	PFAS PERFLUORODODECANOIC ACID (PFDoDA)	PFAS PERFLUOROTRIDECANOIC ACID (PFTrDA)
10605886	10-12-24	BH1-0.5	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605891	10-12-24	BH3-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605897	10-12-24	BH5-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605903	10-12-24	BH7-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605906	10-12-24	BH8-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605910	10-12-24	BH9-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605917	10-12-24	BH11-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605920	10-12-24	BH12-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605923	10-12-24	BH13-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605927	10-12-24	BH15-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605929	10-12-24	BH16-0.1	SOIL	0.0054	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR
10605932	10-12-24	BH17-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605934	10-12-24	BH18-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605938	10-12-24	BH19-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605944	10-12-24	BH21-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10605947	10-12-24	BH22-0.1	SOIL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

LORR Limit of Reporting has been raised due to high moisture content, insufficient sample or matrix interference.

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

PFAS

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PFAS PERFLUOROTETRADECANOIC ACID (PFTeDA)	PFAS PERFLUOROOCTANE SULFONAMIDE (FOSA)	PFAS N-METHYL PERFLUOROOCTANE SULFONAMIDE	PFAS N-ETHYL PERFLUOROOCTANE SULFONAMIDE	PFAS MeFOSE mg/kg	PFAS EtFOSE mg/kg	PFAS MeFOSAA mg/kg	PFAS EtFOSAA mg/kg
10605886	10-12-24	BH1-0.5	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605891	10-12-24	BH3-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605897	10-12-24	BH5-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605903	10-12-24	BH7-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605906	10-12-24	BH8-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605910	10-12-24	BH9-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605917	10-12-24	BH11-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605920	10-12-24	BH12-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605923	10-12-24	BH13-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605927	10-12-24	BH15-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605929	10-12-24	BH16-0.1	SOIL	<0.005 LORR	0.0090	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.002 LORR	<0.002 LORR
10605932	10-12-24	BH17-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605934	10-12-24	BH18-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605938	10-12-24	BH19-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605944	10-12-24	BH21-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002
10605947	10-12-24	BH22-0.1	SOIL	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002

LORR Limit of Reporting has been raised due to high moisture content, insufficient sample or matrix interference.

Samples not collected by ALS and are tested as received.

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Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

PFAS

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	PFAS 4:2 FLUOROTELOMER SULFONIC ACID	PFAS 6:2 FLUOROTELOMER SULFONIC ACID	PFAS 8:2 FLUOROTELOMER SULFONIC ACID	PFAS 10:2 FLUOROTELOMER SULFONIC ACID	PFAS SUM OF PFAS mg/kg	PFAS SUM OF PFHxS AND PFOS mg/kg	PFAS SUM OF PFAS (WADER LIST) mg/kg	PFAS PFOS SURROGATE %
10605886	10-12-24	BH1-0.5	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	100
10605891	10-12-24	BH3-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	94
10605897	10-12-24	BH5-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	91
10605903	10-12-24	BH7-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	93
10605906	10-12-24	BH8-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003	106
10605910	10-12-24	BH9-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	90
10605917	10-12-24	BH11-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	94
10605920	10-12-24	BH12-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	0.0002	0.0002	101
10605923	10-12-24	BH13-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	102
10605927	10-12-24	BH15-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.0005	0.0005	98
10605929	10-12-24	BH16-0.1	SOIL	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.005 LORR	0.32	0.26	0.27	97
10605932	10-12-24	BH17-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0004	0.0004	0.0004	108
10605934	10-12-24	BH18-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003	100
10605938	10-12-24	BH19-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003	99
10605944	10-12-24	BH21-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003	93
10605947	10-12-24	BH22-0.1	SOIL	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	95

LORR Limit of Reporting has been raised due to high moisture content, insufficient sample or matrix interference.

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

PFAS

Sample	*Sampled Date*	*Your Ref*	*Analysis:* / *Component:* / *Units:* / *Sample Type*	PFAS PFOA SURROGATE %
10605886	10-12-24	BH1-0.5	SOIL	95
10605891	10-12-24	BH3-0.1	SOIL	92
10605897	10-12-24	BH5-0.1	SOIL	89
10605903	10-12-24	BH7-0.1	SOIL	90
10605906	10-12-24	BH8-0.1	SOIL	91
10605910	10-12-24	BH9-0.1	SOIL	95
10605917	10-12-24	BH11-0.1	SOIL	90
10605920	10-12-24	BH12-0.1	SOIL	92
10605923	10-12-24	BH13-0.1	SOIL	94
10605927	10-12-24	BH15-0.1	SOIL	91
10605929	10-12-24	BH16-0.1	SOIL	86
10605932	10-12-24	BH17-0.1	SOIL	89
10605934	10-12-24	BH18-0.1	SOIL	86
10605938	10-12-24	BH19-0.1	SOIL	92
10605944	10-12-24	BH21-0.1	SOIL	90
10605947	10-12-24	BH22-0.1	SOIL	85

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

Batch No: **24-73137**
Report Number: **242283**
Client: **AS James Pty Ltd**
Client Program Ref: **123072 E1**

Subcontracted

Sample	Sampled Date	Your Ref	Analysis: / Component: / Units: / Sample Type	Asbestos ASBESTOS -
10605888	10-12-24	BH2-0.1	SOIL	Not Detected
10605894	10-12-24	BH4-0.1	SOIL	Not Detected
10605897	10-12-24	BH5-0.1	SOIL	Not Detected
10605903	10-12-24	BH7-0.1	SOIL	Not Detected
10605910	10-12-24	BH9-0.1	SOIL	Not Detected
10605914	10-12-24	BH10-0.1	SOIL	Not Detected
10605917	10-12-24	BH11-0.1	SOIL	Not Detected
10605920	10-12-24	BH12-0.1	SOIL	Not Detected
10605923	10-12-24	BH13-0.1	SOIL	Not Detected
10605925	10-12-24	BH14-0.1	SOIL	Not Detected
10605927	10-12-24	BH15-0.1	SOIL	Not Detected
10605929	10-12-24	BH16-0.1	SOIL	Not Detected
10605934	10-12-24	BH18-0.1	SOIL	Not Detected
10605941	10-12-24	BH20-0.1	SOIL	Not Detected
10605944	10-12-24	BH21-0.1	SOIL	Not Detected
10605947	10-12-24	BH22-0.1	SOIL	Not Detected

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.

QA/QC Compliance Assessment and Control Data

Work Order	: ASJAMES	**Page**	: 1 of 73
Client	: ASJAMES	**Laboratory**	: Scoresby Laboratory
Contact	:	**Telephone**	: 03 8756 8000
Project	: 24-73137	**Date Samples Received**	: 11-December-2024
Site	:	**Issue Date**	: 08-January-2025
Sampler	: MK	**No. Samples Received**	: 70
Order Number	:	**No. Samples Analysed**	: 31

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 and external review. Many components of this report contribute to the overall Quality assessment.

Brief method summaries and references are also provided to assist in traceability.

Summary of QC Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **Number of Method Blank value outliers :**
- **Number of Duplicate outliers :** 0
- **Number of Laboratory Control outliers :** 0
- **Number of Matrix Spike outliers :** 0
- **For all regular sample matrices, Number of surrogate recovery outliers :** 0

Analysis Holding Time Compliance

Holding times may vary depending on test and preservation used.

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 Water 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.

Sample Number: **10605886** ***Sampling Point:*** **BH1-0.5** ***Matrix:*** **SOIL**	***Sampled Date***	***Date analysed***	***Due for analysis***	***Evaluation***	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	

WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	
	Sampled Date	***Date analysed***	***Due for analysis***	***Evaluation***	
Sample Number: **10605888** ***Sampling Point:*** **BH2-0.1** ***Matrix:*** **SOIL**					
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605891 Sampling Point: BH3-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605894 Sampling Point: BH4-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605897 Sampling Point: BH5-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	06-Feb-2025	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605899 Sampling Point: BH5-1.0 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	06-Feb-2025	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605900 Sampling Point: BH6-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605903 Sampling Point: BH7-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605906 Sampling Point: BH8-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	✗	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605910 Sampling Point: BH9-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605912 Sampling Point: BH9-1.0 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605914 Sampling Point: BH10-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	06-Feb-2025	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605917 Sampling Point: BH11-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605920 Sampling Point: BH12-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605923 Sampling Point: BH13-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	06-Feb-2025	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605925 Sampling Point: BH14-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605927 Sampling Point: BH15-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605929 Sampling Point: BH16-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	20-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	✗	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605932 Sampling Point: BH17-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	06-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	

: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605934 Sampling Point: BH18-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605938 Sampling Point: BH19-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	06-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	

: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	
Sample Number: **10605939** ***Sampling Point:*** **BH19-0.5** ***Matrix:*** **SOIL**	***Sampled Date***	***Date analysed***	***Due for analysis***	***Evaluation***	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WD003 : Cation Exch Capacity					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
WD045G : S-Chloride(DA)					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	06-Feb-2025	✓	
WP004 : S-OOC					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
WD041G : S-SO4-Da					
Glass Jar 250 mL	10-Dec-2024	18-Dec-2024	09-Jan-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605941 Sampling Point: BH20-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605943 Sampling Point: BH20-1.0 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	17-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605944 Sampling Point: BH21-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	✗	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

Sample Number: 10605947 Sampling Point: BH22-0.1 Matrix: SOIL	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : BTEXN					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP084 : CHC Sum					
Glass Jar 250 mL	10-Dec-2024		04-Feb-2025	N/A	
WP084 : CHCS					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EG048G : Chromium 6+ DA					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	09-Jan-2025	✓	
QWI-EN.WK040T : FLUORIDE SED TOT					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	06-Feb-2025	✓	
WP074 : HVOLs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125 & WP074 : MAHs					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WG020B : MS Metals Rev Aq Reg					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	06-Feb-2025	✓	
WP075B : PAHs in Soil					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP066 : PCBs in sediments					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
EP231X : PFOS/PFOA					
PFAS in soil	10-Dec-2024	19-Dec-2024	10-Jun-2025	✓	
EA002 : PH UNITS SEDIMENT					
Glass Jar 250 mL	10-Dec-2024	08-Jan-2025	17-Dec-2024	×	
WP075A : Phenols (Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WP075A : Phenols (Non Hal)					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
WK026SF : S-CN					
Glass Jar 250 mL	10-Dec-2024	16-Dec-2024	24-Dec-2024	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
WP071 : TRH & TPH >C10					
Glass Jar 250 mL	10-Dec-2024	17-Dec-2024	04-Feb-2025	✓	
WP074 (F1 not NATA) : TRH & TPH C6-C					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP071 : TRH F2					
Glass Jar 250 mL	10-Dec-2024		10-Dec-2024	N/A	

	Sampled Date	Date analysed	Due for analysis	Evaluation	
Sample Number: **10605950** ***Sampling Point:*** **Blind A** ***Matrix:*** **SOIL**					
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
	Sampled Date	**Date analysed**	**Due for analysis**	**Evaluation**	
Sample Number: **10605951** ***Sampling Point:*** **Blind B** ***Matrix:*** **SOIL**					
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
	Sampled Date	**Date analysed**	**Due for analysis**	**Evaluation**	
Sample Number: **10605953** ***Sampling Point:*** **Blind D** ***Matrix:*** **SOIL**					
WP068A : OCP_SOIL					
Glass Jar 250 mL	10-Dec-2024	13-Dec-2024	04-Feb-2025	✓	
: S-TS-FCALC					
Glass Jar 250 mL	10-Dec-2024		24-Dec-2024	N/A	
	Sampled Date	**Date analysed**	**Due for analysis**	**Evaluation**	
Sample Number: **10605954** ***Sampling Point:*** **ASJRF 1** ***Matrix:*** **WATER**					
WG020A : MS Total Metals					
150mL Plastic (RED label - metals acidified)	10-Dec-2024	17-Dec-2024	10-Jun-2025	✓	

Sample Number: 10605955 Sampling Point: ASJRF 2 Matrix: WATER	Sampled Date	Date analysed	Due for analysis	Evaluation	
WP074 : HVOLs					
Glass - 40mL - vial clear with preservative (X 3)	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
EP125A : MAHS					
Glass - 40mL - vial clear with preservative (X 3)	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	
WP125A : Solvents 1					
Glass - 40mL - vial clear with preservative (X 3)	10-Dec-2024	13-Dec-2024	24-Dec-2024	✓	

Brief Method Summaries

The analytical procedures used by the Water Business 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 fully validated and are often at client request. The following table 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
BTEXN	WP074	SOIL	In-house: Referenced to USEPA SW 846 - 8260D Extracts are analysed by Purge and Trap, Capillary GC /MS. Quantification is by comparison against an established 5 point calibration curve.
Cation Exch Capacity	WD003	SOIL	In-house: Based on Rayment & Higginson (1992) - 15B1, 15B2, 15B3, and 15C1. Sample is extracted with Ammonium Acetate to exchange the cations for ammonia. The soils are then extracted with sodium acetate to replace the adsorbed NH4 and determined.
CHCS	WP084	SOIL	In-house: Referenced to US EPA, method 8270, 8121, 3510, 3540. Water samples are extracted with dichloromethane. Soil sediment and slurry samples are extracted with a dichloromethane: acetone mixture. Extracts are then analysed on a GCMS.
S-Chloride(DA)	WD045G	SOIL	In-house: Referenced to APHA 4500-Cl- G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. Librated thiocyanate forms coloured ferric thiocyanate.
S-CN	WK026SF	SOIL	In-house: Referenced to APHA 4500-CN C / ASTM D7511. Caustic leachates of soil samples are determined on an automated segmented flow analyser.
PFOS/PFOA	EP231X	SOIL	In-house: Analysis of soils for PFAS by solvent extraction followed by LC-Electrospray-MS-MS using MRM . Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
FLUORIDE SED TOT	QWI-EN.WK 040T	SOIL	In-house: This method describes the determination of fluoride in soils and sediments.
HVOLs	WP074	SOIL	In-house: Referenced to USEPA SW 846 - 8260D Extracts are analysed by Purge and Trap, Capillary GC /MS. Quantification is by comparison against an established 5 point calibration curve.
MAHs	WP125 & WP074	SOIL	In-house: Referenced to USEPA SW 846 - 8260D Leachate samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve.
MS Metals Rev Aq Reg	WG020B	SOIL	MS Metals Rev Aq Reg
OCP_SOIL	WP068A	SOIL	In-house: Referenced to US EPA, Method 8270E, 8081, 3510, 3540. This document describes the methods used for the extraction of organochlorine pesticides (OCP) from samples & their subsequent determination and quantitation by GC-MS.
S-OOC	WP004	SOIL	In-house: Referenced to AS1289.4.1.1. Dichromate oxidation method after Walkley and Black. .
PAHs in Soil	WP075B	SOIL	In house: Referenced to USEPA SW 846 - 8270E. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve.
PCBs in sediments	WP066	SOIL	Polychlorinated biphenyl

PH UNITS SEDIMENT	EA002	SOIL	In-house: APHA 4500H+. pH measurement is the determination of the activity of hydrogen ions by potentiometric measurement using electrodes. This method details the determination of pH value of soil, using a 1:5 soil / water leach procedure.
Phenols (Hal)	WP075A	SOIL	In-house: Referenced to USEPA SW 846 - 8270E This method is designed to determine the concentration of individual phenols in soil, sludge, sediment, water, TCLP, and ASLP samples by GCMS .
Phenols (Non Hal)	WP075A	SOIL	In-house: Referenced to USEPA SW 846 - 8270E This method is designed to determine the concentration of individual phenols in soil, sludge, sediment, water, TCLP, and ASLP samples . .
S-SO4-Da	WD041G	SOIL	In-house: Referenced to APHA 4500-SO4: Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride and analysed via discrete analyser.
CHC Sum	WP084	SOIL	In-house: Referenced to US EPA, method 8270, 8121, 3510, 3540. Water samples are extracted with dichloromethane. Soil sediment and slurry samples are extracted with a dichloromethane: acetone mixture. Extracts are then analysed on a GCMS.
Chromium 6+ DA	EG048G	SOIL	In-house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment.
TRH F2	WP071	SOIL	In-house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C16.
TRH & TPH >C10	WP071	SOIL	In-house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range > C10 - C40.
TRH & TPH C6-C10	WP074 (F1 not NATA)	SOIL	Total Recoverable Hydrocarbons (C6-C10) & F1
S-TS-FCALC		SOIL	FOR CALCULATION PURPOSES ONLY Total Solids for Soil
HVOLs	WP074	WATER	In-house: Referenced to USEPA SW 846 - 8260D Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve.
MAHS	EP125A	WATER	MAHs
MS Total Metals	WG020A	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020: The ICPMS technique analyse selective elements by ionisation. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios.
Solvents 1	WP125A	WATER	In house: USEPA 8260D. This is a headspace technique used to determine the concentration of various volatile organic compounds via gas chromatography and mass spectrometer or flame ionisation detector in various aqueous samples.
Asbestos	EA200	SOIL	Outsourced to subcontracting laboratory - EA200 - Asbestos Soil (ALS Environmental Springvale)

QUALITY CONTROL - BLANKS

Lab Sample ID	Client Sample ID	Analysis	Analyte	Units	LOR	Pass/Fail		Sample Value
10625110	QC - Blank	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	PASS		**<0.5**
			Benzene	mg/kg	<0.5	PASS		**<0.5**
			Cumene	mg/kg	<0.5	PASS		**<0.5**
			Ethyl Benzene	mg/kg	<0.5	PASS		**<0.5**
			Styrene	mg/kg	<0.5	PASS		**<0.5**
			Toluene	mg/kg	<0.5	PASS		**<0.5**
			Xylenes	mg/kg	<0.5	PASS		**<0.5**
10621616	QC - Blank	OCP	2,4,5,6-tetrachloro-m-xylene-SURR	%		PASS		**99**
			a-Endosulphan	mg/kg	<0.05	PASS		**<0.05**
			Aldrin	mg/kg	<0.05	PASS		**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS		**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS		**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS		**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS		**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS		**<0.05**
			Chlordane	mg/kg	<0.05	PASS		**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS		**<0.05**
			DDD	mg/kg	<0.05	PASS		**<0.05**
			DDE	mg/kg	<0.05	PASS		**<0.05**
			DDT	mg/kg	<0.05	PASS		**<0.05**
			Dieldrin	mg/kg	<0.05	PASS		**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS		**<0.05**
			Endrin	mg/kg	<0.05	PASS		**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS		**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS		**<0.05**
			Heptachlor	mg/kg	<0.05	PASS		**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS		**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS		**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS		**<0.05**
			Oxychlordane	mg/kg	<0.05	PASS		**<0.05**
			Sum of Aldrin and Dieldrin	mg/kg	<0.05	PASS		**<0.05**
			Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	PASS		**<0.05**
			Sum of DDD, DDE and DDT	mg/kg	<0.05	PASS		**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS		**<0.05**
10621631	QC - Blank	PAH	Acenaphthene	mg/kg	<0.1	PASS		**<0.1**
			Acenaphthylene	mg/kg	<0.1	PASS		**<0.1**
			Anthracene	mg/kg	<0.1	PASS		**<0.1**
			BaP TEQ (half LOR)	mg/kg	<0.1	PASS		**0.1**
			BaP TEQ (LOR)	mg/kg	0.2	PASS		**0.2**
			BaP TEQ (zero)	mg/kg	<0.1	PASS		**<0.1**
			Benz(a)anthracene	mg/kg	<0.1	PASS		**<0.1**

							Sample Value
10621631	QC - Blank	PAH	Benzo(a)pyrene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(b)fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(g,h,i)perylene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(k)fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Chrysene	mg/kg	<0.1	PASS	**<0.1**
			Dibenz(a,h)anthracene	mg/kg	<0.1	PASS	**<0.1**
			Fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Fluorene	mg/kg	<0.1	PASS	**<0.1**
			Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	PASS	**<0.1**
			Naphthalene	mg/kg	<0.1	PASS	**<0.1**
			Phenanthrene	mg/kg	<0.1	PASS	**<0.1**
			p-Terphenyl-d14-SURR	%		PASS	**93**
			Pyrene	mg/kg	<0.1	PASS	**<0.1**
			Total PAH	mg/kg	<0.1	PASS	**<0.1**
		PCB	2-Fluorobiphenyl-SURR	%		PASS	**94**
			Aroclor 1016	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1221	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1232	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1242	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1248	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1254	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1260	mg/kg	<0.1	PASS	**<0.1**
			Total PCBs	mg/kg	<0.1	PASS	**<0.1**
10621166	QC - Blank	PAH	Acenaphthene	mg/kg	<0.1	PASS	**<0.1**
			Acenaphthylene	mg/kg	<0.1	PASS	**<0.1**
			Anthracene	mg/kg	<0.1	PASS	**<0.1**
			Benz(a)anthracene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(a)pyrene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(b)fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(g,h,i)perylene	mg/kg	<0.1	PASS	**<0.1**
			Benzo(k)fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Chrysene	mg/kg	<0.1	PASS	**<0.1**
			Dibenz(a,h)anthracene	mg/kg	<0.1	PASS	**<0.1**
			Fluoranthene	mg/kg	<0.1	PASS	**<0.1**
			Fluorene	mg/kg	<0.1	PASS	**<0.1**
			Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	PASS	**<0.1**
			Naphthalene	mg/kg	<0.1	PASS	**<0.1**
			Phenanthrene	mg/kg	<0.1	PASS	**<0.1**
			p-Terphenyl-d14-SURR	%		PASS	**94**
			Pyrene	mg/kg	<0.1	PASS	**<0.1**
			Total PAH	mg/kg	<0.1	PASS	**<0.1**
		PCB	2-Fluorobiphenyl-SURR	%		PASS	**78**
			Aroclor 1016	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1221	mg/kg	<0.1	PASS	**<0.1**

							Sample Value
10621166	QC - Blank	PCB	Aroclor 1232	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1242	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1248	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1254	mg/kg	<0.1	PASS	**<0.1**
			Aroclor 1260	mg/kg	<0.1	PASS	**<0.1**
			Total PCBs	mg/kg	<0.1	PASS	**<0.1**
10649138	QC - Blank	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**<0.0002**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**<0.0005**
			Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**<0.0002**
			PFOA Surrogate	%		PASS	**95**
			PFOS Surrogate	%		PASS	**107**
			Sum of PFAS	mg/kg	<0.0002	PASS	**<0.0002**
			Sum of PFAS (WA DER List)	mg/kg	<0.0002	PASS	**<0.0002**
			Sum of PFHxS and PFOS	mg/kg	<0.0002	PASS	**<0.0002**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10621125	QC - Blank	MAH	1,2,4-Trimethylbenzene	mg/L	<0.001	PASS	**<0.001**
			Benzene	mg/L	<0.001	PASS	**<0.001**
			Cumene	mg/L	<0.001	PASS	**<0.001**
			Ethyl Benzene	mg/L	<0.001	PASS	**<0.001**

								Sample Value
10621125	QC - Blank	MAH	Styrene		mg/L	<0.001	PASS	**<0.001**
			Toluene		mg/L	<0.001	PASS	**<0.001**
			Xylenes		mg/L	<0.003	PASS	**<0.003**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**		
10621010	QC - Blank	MAH	1,2,4-Trimethylbenzene		mg/kg	<0.5	PASS	**<0.5**
			Benzene		mg/kg	<0.5	PASS	**<0.5**
			Cumene		mg/kg	<0.5	PASS	**<0.5**
			Ethyl Benzene		mg/kg	<0.5	PASS	**<0.5**
			Styrene		mg/kg	<0.5	PASS	**<0.5**
			Toluene		mg/kg	<0.5	PASS	**<0.5**
			Xylenes		mg/kg	<0.5	PASS	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**		
10621153	QC - Blank	TRH (C6-C10) & F 1	TPHC6-C9		mg/kg	<20	PASS	**<20**
			TRHC6-C10		mg/kg	<20	PASS	**<20**
			TRHC6-C10 minus BTEX		mg/kg	<20	PASS	**<20**
10620952	QC - Blank	TRH (C6-C10) & F 1	TPHC6-C9		mg/kg	<20	PASS	**<20**
			TRHC6-C10		mg/kg	<20	PASS	**<20**
			TRHC6-C10 minus BTEX		mg/kg	<20	PASS	**<20**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**		
10620611	QC - Blank	TRH & TPH (>C10)	Sum of TRH>C10-C40		mg/kg	<50	PASS	**<50**
			TPH C10-C14		mg/kg	<20	PASS	**<20**
			TPH C15-C28		mg/kg	<50	PASS	**<50**
			TPH C29-C36		mg/kg	<50	PASS	**<50**
			TRH>C10-C16		mg/kg	<20	PASS	**<20**
			TRH>C16-C34		mg/kg	<50	PASS	**<50**
			TRH>C34-C40		mg/kg	<50	PASS	**<50**
10625629	QC - Blank	TRH & TPH (>C10)	Sum of TPH C10-C36		mg/kg	<50	PASS	**<50**
			Sum of TRH>C10-C40		mg/kg	<50	PASS	**<50**
			TPH C10-C14		mg/kg	<20	PASS	**<20**
			TPH C15-C28		mg/kg	<50	PASS	**<50**
			TPH C29-C36		mg/kg	<50	PASS	**<50**
			TRH>C10-C16		mg/kg	<20	PASS	**<20**
			TRH>C16-C34		mg/kg	<50	PASS	**<50**
			TRH>C34-C40		mg/kg	<50	PASS	**<50**
10626365	QC - Blank	TRH & TPH (>C10)	Sum of TRH>C10-C40		mg/kg	<50	PASS	**<50**
			TPH C10-C14		mg/kg	<20	PASS	**<20**
			TPH C15-C28		mg/kg	<50	PASS	**<50**
			TPH C29-C36		mg/kg	<50	PASS	**<50**
			TRH>C10-C16		mg/kg	<20	PASS	**<20**
			TRH>C16-C34		mg/kg	<50	PASS	**<50**
			TRH>C34-C40		mg/kg	<50	PASS	**<50**
10630780	QC - Blank	TRH & TPH (>C10)	Sum of TPH C10-C36		mg/kg	<50	PASS	**<50**
			Sum of TRH>C10-C40		mg/kg	<50	PASS	**<50**
			TPH C10-C14		mg/kg	<20	PASS	**<20**

							Sample Value
10630780	QC - Blank	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	PASS	**<50**
			TPH C29-C36	mg/kg	<50	PASS	**<50**
			TRH>C10-C16	mg/kg	<20	PASS	**<20**
			TRH>C16-C34	mg/kg	<50	PASS	**<50**
			TRH>C34-C40	mg/kg	<50	PASS	**<50**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10693115	QC - Blank	OCP	2,4,5,6-tetrachloro-m-xylene-SURR	%		PASS	**98**
			a-Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			Aldrin	mg/kg	<0.05	PASS	**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS	**<0.05**
			Chlordane	mg/kg	<0.05	PASS	**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS	**<0.05**
			DDD	mg/kg	<0.05	PASS	**<0.05**
			DDE	mg/kg	<0.05	PASS	**<0.05**
			DDT	mg/kg	<0.05	PASS	**<0.05**
			Dieldrin	mg/kg	<0.05	PASS	**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS	**<0.05**
			Endrin	mg/kg	<0.05	PASS	**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS	**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS	**<0.05**
			Heptachlor	mg/kg	<0.05	PASS	**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS	**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS	**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS	**<0.05**
			Oxychlordane	mg/kg	<0.05	PASS	**<0.05**
			Sum of Aldrin and Dieldrin	mg/kg	<0.05	PASS	**<0.05**
			Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			Sum of DDD, DDE and DDT	mg/kg	<0.05	PASS	**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS	**<0.05**
10693041	QC - Blank	OCP	2,4,5,6-tetrachloro-m-xylene-SURR	%		PASS	**98**
			a-Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			Aldrin	mg/kg	<0.05	PASS	**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS	**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS	**<0.05**
			Chlordane	mg/kg	<0.05	PASS	**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS	**<0.05**
			DDD	mg/kg	<0.05	PASS	**<0.05**

							Sample Value
10693041	QC - Blank	OCP	DDE	mg/kg	<0.05	PASS	**<0.05**
			DDT	mg/kg	<0.05	PASS	**<0.05**
			Dieldrin	mg/kg	<0.05	PASS	**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS	**<0.05**
			Endrin	mg/kg	<0.05	PASS	**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS	**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS	**<0.05**
			Heptachlor	mg/kg	<0.05	PASS	**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS	**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS	**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS	**<0.05**
			Oxychlordane	mg/kg	<0.05	PASS	**<0.05**
			Sum of Aldrin and Dieldrin	mg/kg	<0.05	PASS	**<0.05**
			Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	PASS	**<0.05**
			Sum of DDD, DDE and DDT	mg/kg	<0.05	PASS	**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS	**<0.05**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10621601	QC - Blank	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,3,5-Tetrachlorbenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,3-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,4,5-Tetrachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,4-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,3,5-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,3-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,4-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			2-Chloronaphthalene	mg/kg	<0.1	PASS	**<0.1**
			Benzal Chloride	mg/kg	<0.1	PASS	**<0.1**
			Benzotrichloride	mg/kg	<0.1	PASS	**<0.1**
			Benzylchloride	mg/kg	<0.1	PASS	**<0.1**
			Hexachlorobutadiene	mg/kg	<0.1	PASS	**<0.1**
			Hexachlorocyclopentadiene	mg/kg	<0.1	PASS	**<0.1**
			Hexachloroethane	mg/kg	<0.1	PASS	**<0.1**
			Pentachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
10621200	QC - Blank	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,3,5-Tetrachlorbenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,3-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,4,5-Tetrachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2,4-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,2-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,3,5-Trichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,3-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			1,4-Dichlorobenzene	mg/kg	<0.1	PASS	**<0.1**
			2-Chloronaphthalene	mg/kg	<0.1	PASS	**<0.1**

							Sample Value
10621200	QC - Blank	CHC	Benzal Chloride	mg/kg	<0.1	PASS	**<0.1**
			Benzotrichloride	mg/kg	<0.1	PASS	**<0.1**
			Benzylchloride	mg/kg	<0.1	PASS	**<0.1**
			Hexachlorobutadiene	mg/kg	<0.1	PASS	**<0.1**
			Hexachlorocyclopentadiene	mg/kg	<0.1	PASS	**<0.1**
			Hexachloroethane	mg/kg	<0.1	PASS	**<0.1**
			Pentachlorobenzene	mg/kg	<0.1	PASS	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10621597	QC - Blank	Phenols(Halo)	2,3,4,5-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,3,4,6-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,3,5,6-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4,5-Trichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4,6-Trichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4-Dichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,6-Dichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2-Chlorophenol	mg/kg	<0.5	PASS	**<0.5**
			4-Chloro-3-Methylphenol	mg/kg	<0.5	PASS	**<0.5**
			Pentachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			Total Phenols (Halogenated)	mg/kg	<0.5	PASS	**<0.5**
10621232	QC - Blank	Phenols(Halo)	2,3,4,5-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,3,4,6-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,3,5,6-Tetrachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4,5-Trichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4,6-Trichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,4-Dichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2,6-Dichlorophenol	mg/kg	<0.5	PASS	**<0.5**
			2-Chlorophenol	mg/kg	<0.5	PASS	**<0.5**
			4-Chloro-3-Methylphenol	mg/kg	<0.5	PASS	**<0.5**
			Pentachlorophenol	mg/kg	<0.5	PASS	**<0.5**
			Total Phenols (Halogenated)	mg/kg	<0.5	PASS	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10621592	QC - Blank	Phenols(NonHalo)	2,4-Dimethylphenol	mg/kg	<0.5	PASS	**<0.5**
			2,4-Dinitrophenol	mg/kg	<30	PASS	**<30**
			2-Cyclohexyl-4,6-Dinitrophenol	mg/kg	<30	PASS	**<30**
			2-Methyl-4,6-Dinitrophenol	mg/kg	<10	PASS	**<10**
			2-Nitrophenol	mg/kg	<0.5	PASS	**<0.5**
			4-Nitrophenol	mg/kg	<0.5	PASS	**<0.5**
			Dinoseb	mg/kg	<10	PASS	**<10**
			Phenol	mg/kg	<0.5	PASS	**<0.5**
			Total Cresols	mg/kg	<1	PASS	**<1**
			Total Phenols (non Halogenated)	mg/kg	<30	PASS	**<30**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10621123	QC - Blank	HVOL	1,1,1,2-Tetrachloroethane	mg/L	<0.001	PASS	**<0.001**
			1,1,1-Trichloroethane	mg/L	<0.001	PASS	**<0.001**

							Sample Value
10621123	QC - Blank	HVOL	1,1,2,2-Tetrachloroethane	mg/L	<0.001	PASS	**<0.001**
			1,1,2-Trichlorethane	mg/L	<0.001	PASS	**<0.001**
			1,1-Dichloroethane	mg/L	<0.001	PASS	**<0.001**
			1,1-Dichloroethene	mg/L	<0.001	PASS	**<0.001**
			1,1-Dichloropropene	mg/L	<0.001	PASS	**<0.001**
			1,2,3-Trichloropropane	mg/L	<0.001	PASS	**<0.001**
			1,2-Dibromo-3-chloropropane	mg/L	<0.001	PASS	**<0.001**
			1,2-Dibromoethane	mg/L	<0.001	PASS	**<0.001**
			1,2-Dichloroethane	mg/L	<0.001	PASS	**<0.001**
			1,2-Dichloroethene [cis]	mg/L	<0.001	PASS	**<0.001**
			1,2-Dichloroethene [trans]	mg/L	<0.001	PASS	**<0.001**
			1,2-Dichloropropane	mg/L	<0.001	PASS	**<0.001**
			1,3-Dichloropropane	mg/L	<0.001	PASS	**<0.001**
			1,3-Dichloropropene [cis]	mg/L	<0.001	PASS	**<0.001**
			1,3-Dichloropropene [trans]	mg/L	<0.001	PASS	**<0.001**
			2,2-Dichloropropane	mg/L	<0.001	PASS	**<0.001**
			2-Chlorotoluene	mg/L	<0.001	PASS	**<0.001**
			4-Chlorotoluene	mg/L	<0.001	PASS	**<0.001**
			Bromobenzene	mg/L	<0.001	PASS	**<0.001**
			Bromochloromethane	mg/L	<0.001	PASS	**<0.001**
			Bromodichloromethane	mg/L	<0.001	PASS	**<0.001**
			Bromoform (Tribromomethane)	mg/L	<0.001	PASS	**<0.001**
			Carbon Tetrachloride	mg/L	<0.001	PASS	**<0.001**
			Chlorobenzene	mg/L	<0.001	PASS	**<0.001**
			Chloroform (Trichloromethane)	mg/L	<0.001	PASS	**<0.001**
			Dibromochloromethane	mg/L	<0.001	PASS	**<0.001**
			Dibromomethane	mg/L	<0.001	PASS	**<0.001**
			Dichloromethane	mg/L	<0.002	PASS	**<0.002**
			Tetrachloroethene	mg/L	<0.001	PASS	**<0.001**
			Trichloroethene	mg/L	<0.001	PASS	**<0.001**
			Trichlorofluoromethane (CFC11)	mg/L	<0.002	PASS	**<0.002**
			Vinyl Chloride (Monomer)	mg/L	<0.002	PASS	**<0.002**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10625105	QC - Blank	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**<0.5**

							Sample Value
10625105	QC - Blank	HVOL	1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**<0.5**
			1,4-Dichloroethane-d4-SURR	%		PASS	**110.2**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**
			2-Chlorotoluene	mg/kg	<0.5	PASS	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**<0.5**
			Carbon Tetrachloride	mg/kg	<0.5	PASS	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**<0.5**
			Toluene-d8-SURR	%		PASS	**111.6**
			Trichloroethene	mg/kg	<0.5	PASS	**<0.5**
			Trichlorofluoromethane (CFC11)	mg/kg	<2	PASS	**<2**
			Vinyl Chloride (Monomer)	mg/kg	<1	PASS	**<1**
10620988	QC - Blank	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**<0.5**
			1,4-Dichloroethane-d4-SURR	%		PASS	**90.7**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**<0.5**

							Sample Value
10620988	QC - Blank	HVOL	2-Chlorotoluene	mg/kg	<0.5	PASS	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**<0.5**
			Carbon Tetrachloride	mg/kg	<0.5	PASS	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**<0.5**
			Toluene-d8-SURR	%		PASS	**104.9**
			Trichloroethene	mg/kg	<0.5	PASS	**<0.5**
			Trichlorofluoromethane (CFC11)	mg/kg	<2	PASS	**<2**
			Vinyl Chloride (Monomer)	mg/kg	<1	PASS	**<1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10620869	QC - Blank	SOLVENTS	Acetone	mg/L	<0.01	PASS	**<0.01**
			Acrylonitrile	mg/L	<0.01	PASS	**<0.01**
			Ethylhexyl Acrylate	mg/L	<0.01	PASS	**<0.01**
			Isopropanol (Isopropyl Alcohol)	mg/L	<0.01	PASS	**<0.01**
			Methyl Isobutyl Ketone	mg/L	<0.01	PASS	**<0.01**
			Methylethyl Ketone	mg/L	<0.01	PASS	**<0.01**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10631360	QC - Blank	MS Total Metals	Antimony	mg/L	<0.001	PASS	**<0.001**
			Arsenic	mg/L	<0.001	PASS	**<0.001**
			Barium	mg/L	<0.001	PASS	**<0.001**
			Beryllium	mg/L	<0.001	PASS	**<0.001**
			Boron	mg/L	<0.02	PASS	**<0.02**
			Cadmium	mg/L	<0.0002	PASS	**<0.0002**
			Chromium	mg/L	<0.001	PASS	**<0.001**
			Cobalt	mg/L	<0.001	PASS	**<0.001**
			Copper	mg/L	<0.001	PASS	**<0.001**
			Iron	mg/L	<0.01	PASS	**<0.01**
			Lead	mg/L	<0.001	PASS	**<0.001**
			Manganese	mg/L	<0.001	PASS	**<0.001**
			Mercury	mg/L	<0.0001	PASS	**<0.0001**
			Molybdenum	mg/L	<0.001	PASS	**<0.001**
			Nickel	mg/L	<0.001	PASS	**<0.001**
			Selenium	mg/L	<0.001	PASS	**<0.001**
			Silver	mg/L	<0.001	PASS	**<0.001**
			Tin	mg/L	<0.001	PASS	**<0.001**
			Zinc	mg/L	<0.001	PASS	**<0.001**

							Sample Value
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**	
10651594	QC - Blank	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**<0.0002**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**<0.0005**
			Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**<0.0002**
			PFOA Surrogate	%		PASS	**94**
			PFOS Surrogate	%		PASS	**99**
			Sum of PFAS	mg/kg	<0.0002	PASS	**<0.0002**
			Sum of PFAS (WA DER List)	mg/kg	<0.0002	PASS	**<0.0002**
			Sum of PFHxS and PFOS	mg/kg	<0.0002	PASS	**<0.0002**

QUALITY CONTROL - DUPLICATES

Lab Sample ID	Client Sample ID	Analysis	Analyte	Units	LOR	Pass/Fail		% RPD	Duplicate Value	Expected Value	Sample Value
10621630	BH1-0.5	PAH	Acenaphthene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Acenaphthylene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Anthracene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			BaP TEQ (half LOR)	mg/kg	<0.1	PASS		**0.0**	**0.1**		**0.1**
			BaP TEQ (LOR)	mg/kg	0.2	PASS		**0.0**	**0.2**		**0.2**
			BaP TEQ (zero)	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Benz(a)anthracene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Benzo(a)pyrene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Benzo(b)fluoranthene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Benzo(g,h,i)perylene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Benzo(k)fluoranthene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Chrysene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Dibenz(a,h)anthracene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Fluoranthene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Fluorene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Naphthalene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Phenanthrene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			p-Terphenyl-d14-SURR	%		PASS		**0.0**	**95**		**95**
			Pyrene	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Total PAH	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
		PCB	2-Fluorobiphenyl-SURR	%		PASS		**3.1**	**97**		**94**
			Aroclor 1016	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1221	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1232	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1242	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1248	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1254	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
			Aroclor 1260	mg/kg	<0.1	PASS		**0**	**<0.1**		**<0.1**
10621609	BH11-0.1	OCP	2,4,5,6-tetrachloro-m-xylene-SURR	%		PASS		**1.1**	**94**		**95**
			a-Endosulphan	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			Aldrin	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			Chlordane	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			DDD	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**
			DDE	mg/kg	<0.05	PASS		**0**	**<0.05**		**<0.05**

							% RPD	Duplicate Value	Expected Value	Sample Value
10621609	BH11-0.1	OCP	DDT	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Dieldrin	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Endrin	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Heptachlor	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Oxychlordane	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Sum of Aldrin and Dieldrin	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			Sum of DDD, DDE and DDT	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS	**0**	**<0.05**		**<0.05**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10630306	NCP	Cyanide	Cyanide, as CN	mg/kg	<5	PASS	**0**		**<5**	**<5**
		Total Cr 6+ DA	Hexavalent Chromium (Total) Soil DA	mg/kg	<1	PASS	**0**		**<1**	**<1**
10627725	NCP	Total Fluoride	Total Fluoride, as F	mg/kg	<100	PASS	**8.6**		**120**	**130**
10632215	BH5-0.1	OOC	Oxidisable organic carbon	%	<0.1	PASS	**0.0**		**0.5**	**0.5**
10627044	BH10-0.1	CEC	Cation exchange capacity	meq/100g		PASS	**0.5**		**12**	**12**
10622040	BH15-0.1	pH	pH, units	Units	<0.1	PASS	**0.0**		**4.9**	**4.9**
10630300	BH19-0.1	Chloride	Chloride, as Cl	mg/kg	<5	PASS	**10.2**		**34**	**37**
		SO4	Sulfate	mg/kg	<10	PASS	**0**		**<50**	**<50**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10631307	NCP	MS Total Metals	Antimony	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Arsenic	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Barium	mg/kg	<5	PASS	**9.0**		**84**	**77**
			Beryllium	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Boron	mg/kg	<10	PASS	**0**		**<10**	**<10**
			Cadmium	mg/kg	<0.2	PASS	**0**		**<0.2**	**<0.2**
			Chromium	mg/kg	<5	PASS	**15.2**		**140**	**120**
			Cobalt	mg/kg	<5	PASS	**9.6**		**17**	**15**
			Copper	mg/kg	<5	PASS	**5.0**		**24**	**23**
			Iron	mg/kg	<10	PASS	**14.3**		**59000**	**51000**
			Lead	mg/kg	<5	PASS	**22.0**		**19**	**15**
			Manganese	mg/kg	<5	PASS	**11.2**		**1000**	**920**
			Mercury	mg/kg	<0.05	PASS	**NA**		**0.06**	**<0.05**
			Molybdenum	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Nickel	mg/kg	<5	PASS	**3.6**		**70**	**67**
			Selenium	mg/kg	<3	PASS	**0**		**<3**	**<3**
			Silver	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Tin	mg/kg	<5	PASS	**0**		**<5**	**<5**
			Zinc	mg/kg	<5	PASS	**5.8**		**41**	**39**

								% RPD	Duplicate Value	Expected Value	Sample Value
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10621124	ASJRF 2	MAH	1,2,4-Trimethylbenzene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Benzene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Cumene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Ethyl Benzene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Styrene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Toluene	mg/L	<0.001	PASS		**0**		**<0.001**	**<0.001**
			Xylenes	mg/L	<0.003	PASS		**0**		**<0.003**	**<0.003**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10625107	NCP	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Benzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Cumene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Ethyl Benzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Styrene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Toluene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Xylenes	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
10620989	NCP	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Benzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Cumene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Ethyl Benzene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Styrene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Toluene	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
			Xylenes	mg/kg	<0.5	PASS		**0**		**<0.5**	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10620948	NCP	TRH (C6-C10) & F 1	TPHC6-C9	mg/kg	<20	PASS		**0**		**<20**	**<20**
			TRHC6-C10	mg/kg	<20	PASS		**0**		**<20**	**<20**
			TRHC6-C10 minus BTEX	mg/kg	<20	PASS		**0**		**<20**	**<20**
10621152	NCP	TRH (C6-C10) & F 1	TPHC6-C9	mg/kg	<20	PASS		**0**		**<30**	**<30**
			TRHC6-C10	mg/kg	<20	PASS		**0**		**<30**	**<30**
			TRHC6-C10 minus BTEX	mg/kg	<20	PASS		**0**		**<30**	**<30**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10620608	BH1-0.5	TRH & TPH (>C10)	Sum of TPH C10-C36	mg/kg	<50	PASS		**0**		**<50**	**<50**
			Sum of TRH>C10-C40	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TPH C10-C14	mg/kg	<20	PASS		**0**		**<20**	**<20**
			TPH C15-C28	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TPH C29-C36	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TRH>C10-C16	mg/kg	<20	PASS		**0**		**<20**	**<20**
			TRH>C16-C34	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TRH>C34-C40	mg/kg	<50	PASS		**0**		**<50**	**<50**
10625627	BH9-0.1	TRH & TPH (>C10)	Sum of TPH C10-C36	mg/kg	<50	PASS		**0**		**<50**	**<50**
			Sum of TRH>C10-C40	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TPH C10-C14	mg/kg	<20	PASS		**0**		**<20**	**<20**
			TPH C15-C28	mg/kg	<50	PASS		**0**		**<50**	**<50**
			TPH C29-C36	mg/kg	<50	PASS		**0**		**<50**	**<50**

							% RPD	Duplicate Value	Expected Value	Sample Value
10625627	BH9-0.1	TRH & TPH (>C10)	TRH>C10-C16	mg/kg	<20	PASS	**0**		**<20**	**<20**
			TRH>C16-C34	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TRH>C34-C40	mg/kg	<50	PASS	**0**		**<50**	**<50**
10630777	BH19-0.5	TRH & TPH (>C10)	Sum of TPH C10-C36	mg/kg	<50	PASS	**0**		**<50**	**<50**
			Sum of TRH>C10-C40	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TPH C10-C14	mg/kg	<20	PASS	**0**		**<20**	**<20**
			TPH C15-C28	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TPH C29-C36	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TRH>C10-C16	mg/kg	<20	PASS	**0**		**<20**	**<20**
			TRH>C16-C34	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TRH>C34-C40	mg/kg	<50	PASS	**0**		**<50**	**<50**
10626364	BH21-0.1	TRH & TPH (>C10)	Sum of TPH C10-C36	mg/kg	<50	PASS	**4.7**		**66**	**63**
			Sum of TRH>C10-C40	mg/kg	<50	PASS	**3.3**		**62**	**60**
			TPH C10-C14	mg/kg	<20	PASS	**0**		**<20**	**<20**
			TPH C15-C28	mg/kg	<50	PASS	**0**		**<50**	**<50**
			TPH C29-C36	mg/kg	<50	PASS	**5.0**		**66**	**63**
			TRH>C10-C16	mg/kg	<20	PASS	**0**		**<20**	**<20**
			TRH>C16-C34	mg/kg	<50	PASS	**1.8**		**62**	**60**
			TRH>C34-C40	mg/kg	<50	PASS	**0**		**<50**	**<50**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10693037	BH9-0.1	OCP	2,4,5,6-tetrachloro-m-xylene-SURR	%		PASS	**10.5**		**100**	**90**
			a-Endosulphan	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Aldrin	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Chlordane	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			DDD	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			DDE	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			DDT	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Dieldrin	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Endrin	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Heptachlor	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Oxychlordane	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Sum of Aldrin and Dieldrin	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**

							% RPD	Duplicate Value	Expected Value	Sample Value
10693037	BH9-0.1	OCP	Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			Sum of DDD, DDE and DDT	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS	**0**		**<0.05**	**<0.05**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10621169	BH21-0.1	PCB	2-Fluorobiphenyl-SURR	%		PASS	**5.3**		**78**	**74**
			Aroclor 1016	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1221	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1232	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1242	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1248	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1254	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Aroclor 1260	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Total PCBs	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10621196	NCP	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,3,5-Tetrachlorbenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,3-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,4,5-Tetrachlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,4-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,3,5-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,3-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,4-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			2-Chloronaphthalene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzal Chloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzotrichloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzylchloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Hexachlorobutadiene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Hexachlorocyclopentadiene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Hexachloroethane	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Pentachlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
10621599	BH1-0.5	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,3,5-Tetrachlorbenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,3-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,4,5-Tetrachlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2,4-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,2-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,3,5-Trichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,3-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			1,4-Dichlorobenzene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			2-Chloronaphthalene	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzal Chloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzotrichloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Benzylchloride	mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**

								% RPD	Duplicate Value	Expected Value	Sample Value
10621599	BH1-0.5	CHC	Hexachlorobutadiene		mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Hexachlorocyclopentadiene		mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Hexachloroethane		mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
			Pentachlorobenzene		mg/kg	<0.1	PASS	**0**		**<0.1**	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10621223	NCP	Phenols(Halo)	2,3,4,5-Tetrachlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,3,4,6-Tetrachlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,3,5,6-Tetrachlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,4,5-Trichlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,4,6-Trichlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,4-Dichlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,6-Dichlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2-Chlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			4-Chloro-3-Methylphenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Pentachlorophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Total Phenols (Halogenated)		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10621590	BH1-0.5	Phenols(NonHalo)	2,4-Dimethylphenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2,4-Dinitrophenol		mg/kg	<30	PASS	**0**		**<30**	**<30**
			2-Cyclohexyl-4,6-Dinitrophenol		mg/kg	<30	PASS	**0**		**<30**	**<30**
			2-Methyl-4,6-Dinitrophenol		mg/kg	<10	PASS	**0**		**<10**	**<10**
			2-Nitrophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			4-Nitrophenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dinoseb		mg/kg	<10	PASS	**0**		**<10**	**<10**
			Phenol		mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Total Cresols		mg/kg	<1	PASS	**0**		**<1**	**<1**
			Total Phenols (non Halogenated)		mg/kg	<30	PASS	**0**		**<30**	**<30**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**					
10621122	ASJRF 2	HVOL	1,1,1,2-Tetrachloroethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1,1-Trichloroethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1,2,2-Tetrachloroethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1,2-Trichlorethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1-Dichloroethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1-Dichloroethene		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,1-Dichloropropene		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2,3-Trichloropropane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dibromo-3-chloropropane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dibromoethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dichloroethane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dichloroethene [cis]		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dichloroethene [trans]		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,2-Dichloropropane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,3-Dichloropropane		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			1,3-Dichloropropene [cis]		mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**

							% RPD	Duplicate Value	Expected Value	Sample Value
10621122	ASJRF 2	HVOL	1,3-Dichloropropene [trans]	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			2,2-Dichloropropane	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			2-Chlorotoluene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			4-Chlorotoluene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Bromobenzene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Bromochloromethane	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Bromodichloromethane	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Bromoform (Tribromomethane)	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Carbon Tetrachloride	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Chlorobenzene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Chloroform (Trichloromethane)	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Dibromochloromethane	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Dibromomethane	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Dichloromethane	mg/L	<0.002	PASS	**0**		**<0.002**	**<0.002**
			Tetrachloroethene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Trichloroethene	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Trichlorofluoromethane (CFC11)	mg/L	<0.002	PASS	**0**		**<0.002**	**<0.002**
			Vinyl Chloride (Monomer)	mg/L	<0.002	PASS	**0**		**<0.002**	**<0.002**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10620985	NCP	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,4-Dichloroethane-d4-SURR	%		PASS	**2.4**		**89.45**	**87.3**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2-Chlorotoluene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**

							% RPD	Duplicate Value	Expected Value	Sample Value
10620985	NCP	HVOL	Carbon Tetrachloride	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**0**		**<1**	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Toluene-d8-SURR	%		PASS	**12.6**		**98.05**	**86.4**
			Trichloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Trichlorofluoromethane (CFC11)	mg/kg	<2	PASS	**0**		**<2**	**<2**
			Vinyl Chloride (Monomer)	mg/kg	<1	PASS	**0**		**<1**	**<1**
10625102	NCP	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			1,4-Dichloroethane-d4-SURR	%		PASS	**4.9**		**127.3**	**133.7**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			2-Chlorotoluene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Carbon Tetrachloride	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**0**		**<1**	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Toluene-d8-SURR	%		PASS	**0.5**		**127**	**127.65**

							% RPD	Duplicate Value	Expected Value	Sample Value
10625102	NCP	HVOL	Trichloroethene	mg/kg	<0.5	PASS	**0**		**<0.5**	**<0.5**
			Trichlorofluoromethane (CFC11)	mg/kg	<2	PASS	**0**		**<2**	**<2**
			Vinyl Chloride (Monomer)	mg/kg	<1	PASS	**0**		**<1**	**<1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10620867	ASJRF 2	SOLVENTS	Acetone	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Acrylonitrile	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Ethylhexyl Acrylate	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Isopropanol (Isopropyl Alcohol)	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Methyl Isobutyl Ketone	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Methylethyl Ketone	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10631353	NCP	MS Total Metals	Antimony	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Arsenic	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Barium	mg/L	<0.001	PASS	**0.2**		**0.034**	**0.034**
			Beryllium	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Boron	mg/L	<0.02	PASS	**0**		**<0.02**	**<0.02**
			Cadmium	mg/L	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Chromium	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Cobalt	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Copper	mg/L	<0.001	PASS	**0.0**		**0.012**	**0.012**
			Iron	mg/L	<0.01	PASS	**0**		**<0.01**	**<0.01**
			Lead	mg/L	<0.001	PASS	**1.0**		**0.001**	**0.001**
			Manganese	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Mercury	mg/L	<0.0001	PASS	**0**		**<0.0001**	**<0.0001**
			Molybdenum	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Nickel	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Selenium	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Silver	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Tin	mg/L	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Zinc	mg/L	<0.001	PASS	**6.0**		**0.003**	**0.003**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10651587	NCP	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**

							% RPD	Duplicate Value	Expected Value	Sample Value
10651587	NCP	PFAS	Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**24.6**		**0.0004**	**0.0003**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Sum of PFAS	mg/kg	<0.0002	PASS	**24.6**		**0.0004**	**0.0003**
			Sum of PFAS (WA DER List)	mg/kg	<0.0002	PASS	**24.6**		**0.0004**	**0.0003**
			Sum of PFHxS and PFOS	mg/kg	<0.0002	PASS	**24.6**		**0.0004**	**0.0003**
10649137	NCP	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**15.1**		**0.0015**	**0.0013**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**0**		**<0.001**	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**0**		**<0.0003**	**<0.0003**
			Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**2.5**		**0.0024**	**0.0023**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**1.0**		**0.020**	**0.021**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoropentane sulfonic acid (PFPeS)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**0**		**<0.0005**	**<0.0005**

							% RPD	Duplicate Value	Expected Value	Sample Value
10649137	NCP	PFAS	Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**0**		**<0.0002**	**<0.0002**
			Sum of PFAS	mg/kg	<0.0002	PASS	**0.2**		**0.024**	**0.024**
			Sum of PFAS (WA DER List)	mg/kg	<0.0002	PASS	**1.0**		**0.020**	**0.021**
			Sum of PFHxS and PFOS	mg/kg	<0.0002	PASS	**1.0**		**0.020**	**0.021**

QUALITY CONTROL - SPIKES

Lab Sample ID	Client Sample ID	Analysis	Analyte	Units	LOR	Pass/Fail		% Recovery	Expected Value	Sample Value
10621596	BH3-0.1	Phenols(Halo)	2,3,4,6-Tetrachlorophenol	mg/kg	<0.5	PASS		**87.4**	**2.5**	**<0.5**
			2,3,5,6-Tetrachlorophenol	mg/kg	<0.5	PASS		**91.6**	**1.3**	**<0.5**
			2,4,5-Trichlorophenol	mg/kg	<0.5	PASS		**83.8**	**1.3**	**<0.5**
			2,4,6-Trichlorophenol	mg/kg	<0.5	PASS		**85.8**	**1.3**	**<0.5**
			2,6-Dichlorophenol	mg/kg	<0.5	PASS		**93.2**	**1.3**	**<0.5**
			2-Chlorophenol	mg/kg	<0.5	PASS		**90.2**	**1.3**	**<0.5**
			4-Chloro-3-Methylphenol	mg/kg	<0.5	PASS		**104**	**1.3**	**<0.5**
			Pentachlorophenol	mg/kg	<0.5	PASS		**87.0**	**1.3**	**<0.5**
10621613	BH5-0.1	OCP	a-Endosulphan	mg/kg	<0.05	PASS		**105**	**1.4**	**<0.05**
			Aldrin	mg/kg	<0.05	PASS		**110**	**1.4**	**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS		**102**	**1.4**	**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS		**93.8**	**1.4**	**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS		**93.8**	**1.4**	**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS		**103**	**1.4**	**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS		**92.8**	**1.4**	**<0.05**
			Chlordane	mg/kg	<0.05	PASS		**107**	**2.7**	**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS		**107**	**1.4**	**<0.05**
			DDD	mg/kg	<0.05	PASS		**121**	**1.4**	**<0.05**
			DDE	mg/kg	<0.05	PASS		**103**	**1.4**	**<0.05**
			DDT	mg/kg	<0.05	PASS		**84.8**	**1.4**	**<0.05**
			Dieldrin	mg/kg	<0.05	PASS		**103**	**1.4**	**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS		**102**	**1.4**	**<0.05**
			Endrin	mg/kg	<0.05	PASS		**116**	**1.4**	**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS		**105**	**1.4**	**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS		**111**	**1.4**	**<0.05**
			Heptachlor	mg/kg	<0.05	PASS		**111**	**1.4**	**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS		**101**	**1.4**	**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS		**93.2**	**1.4**	**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS		**82.4**	**1.4**	**<0.05**
			trans-Chlordane	mg/kg	<0.05	PASS		**108**	**1.4**	**<0.05**
10621617	BH20-0.1	PAH	Acenaphthene	mg/kg	<0.1	PASS		**90.4**	**1.6**	**<0.1**
			Acenaphthylene	mg/kg	<0.1	PASS		**104**	**1.6**	**<0.1**
			Anthracene	mg/kg	<0.1	PASS		**96.8**	**1.6**	**<0.1**
			Benz(a)anthracene	mg/kg	<0.1	PASS		**101**	**1.6**	**<0.1**
			Benzo(a)pyrene	mg/kg	<0.1	PASS		**99.6**	**1.6**	**<0.1**
			Benzo(b)fluoranthene	mg/kg	<0.1	PASS		**97.4**	**1.6**	**<0.1**
			Benzo(g,h,i)perylene	mg/kg	<0.1	PASS		**95.0**	**1.6**	**<0.1**
			Benzo(k)fluoranthene	mg/kg	<0.1	PASS		**92.6**	**1.6**	**<0.1**
			Chrysene	mg/kg	<0.1	PASS		**98.6**	**1.6**	**<0.1**
			Dibenz(a,h)anthracene	mg/kg	<0.1	PASS		**97.4**	**1.6**	**<0.1**
			Fluoranthene	mg/kg	<0.1	PASS		**105**	**1.7**	**0.1**

							% Recovery	Expected Value	Sample Value
10621617	BH20-0.1	PAH	Fluorene	mg/kg	<0.1	PASS	**95.0**	**1.6**	**<0.1**
			Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	PASS	**98.2**	**1.6**	**<0.1**
			Naphthalene	mg/kg	<0.1	PASS	**92.6**	**1.6**	**<0.1**
			Phenanthrene	mg/kg	<0.1	PASS	**105**	**1.6**	**<0.1**
			p-Terphenyl-d14-SURR	%		PASS	**100**	**98**	**105**
			Pyrene	mg/kg	<0.1	PASS	**109**	**1.6**	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10627723	NCP	Total Fluoride	Total Fluoride, as F	mg/kg	<100	PASS	**85.1**	**520**	**130**
10630321	NCP	Cyanide	Cyanide, as CN	mg/kg	<5	PASS	**87.4**	**20**	**<5**
10630296	BH19-0.1	SO4	Sulfate	mg/kg	<10	PASS	**92.7**	**1000**	**<50**
10629808	NCP	Total Cr 6+ DA	Hexavalent Chromium (Total) Soil DA	mg/kg	<1	PASS	**82.5**	**20**	**<1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10631308	NCP	MS Total Metals	Arsenic	mg/kg	<5	PASS	**86.3**	**100**	**<5**
			Beryllium	mg/kg	<5	PASS	**72.4**	**100**	**<5**
			Cadmium	mg/kg	<0.2	PASS	**73.6**	**100**	**<0.2**
			Chromium	mg/kg	<5	PASS	**81.6**	**190**	**120**
			Lead	mg/kg	<5	PASS	**115**	**110**	**15**
			Manganese	mg/kg	<5	PASS	**104**	**780**	**920**
			Mercury	mg/kg	<0.05	PASS	**119**	**1.0**	**<0.05**
			Molybdenum	mg/kg	<5	PASS	**98.6**	**100**	**<5**
			Nickel	mg/kg	<5	PASS	**75.3**	**150**	**67**
			Selenium	mg/kg	<3	PASS	**77.2**	**100**	**<3**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10620992	NCP	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	PASS	**113**	**4.4**	**<0.5**
			Benzene	mg/kg	<0.5	PASS	**118**	**4.4**	**<0.5**
			Cumene	mg/kg	<0.5	PASS	**109**	**4.4**	**<0.5**
			Ethyl Benzene	mg/kg	<0.5	PASS	**119**	**4.4**	**<0.5**
			Styrene	mg/kg	<0.5	PASS	**112**	**4.4**	**<0.5**
			Toluene	mg/kg	<0.5	PASS	**131**	**4.4**	**<0.5**
			Xylenes	mg/kg	<0.5	PASS	**117**	**13**	**<0.5**
10625109	BH18-0.1	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	PASS	**81.2**	**5.1**	**<0.5**
			Benzene	mg/kg	<0.5	PASS	**98.9**	**5.1**	**<0.5**
			Cumene	mg/kg	<0.5	PASS	**73.5**	**5.1**	**<0.5**
			Ethyl Benzene	mg/kg	<0.5	PASS	**84.1**	**5.1**	**<0.5**
			Styrene	mg/kg	<0.5	PASS	**74.3**	**5.1**	**<0.5**
			Toluene	mg/kg	<0.5	PASS	**95.2**	**5.1**	**<0.5**
			Xylenes	mg/kg	<0.5	PASS	**93.2**	**15**	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10621142	NCP	TRH (C6-C10) & F 1	TPHC6-C9	mg/kg	<20	PASS	**120**	**110**	**<20**
			TRHC6-C10	mg/kg	<20	PASS	**123**	**100**	**<20**
10620944	NCP	TRH (C6-C10) & F 1	TPHC6-C9	mg/kg	<20	PASS	**128**	**120**	**<20**
			TRHC6-C10	mg/kg	<20	PASS	**123**	**130**	**<20**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10620610	BH5-0.1	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	PASS	**111**	**860**	**<50**

							% Recovery	Expected Value	Sample Value
10620610	BH5-0.1	TRH & TPH (>C10)	TRH>C16-C34	mg/kg	<50	PASS	**113**	**960**	**58**
10630779	NCP	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	PASS	**107**	**880**	**<50**
			TRH>C16-C34	mg/kg	<50	PASS	**106**	**980**	**<50**
10626360	NCP	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	PASS	**104**	**810**	**<50**
			TRH>C16-C34	mg/kg	<50	PASS	**98.7**	**910**	**<50**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10621162	BH18-0.1	PAH	Acenaphthene	mg/kg	<0.1	PASS	**79.4**	**1.6**	**<0.1**
			Acenaphthylene	mg/kg	<0.1	PASS	**92.0**	**1.6**	**<0.1**
			Anthracene	mg/kg	<0.1	PASS	**99.6**	**1.6**	**<0.1**
			Benz(a)anthracene	mg/kg	<0.1	PASS	**104**	**1.6**	**<0.1**
			Benzo(a)pyrene	mg/kg	<0.1	PASS	**94.0**	**1.6**	**<0.1**
			Benzo(b)fluoranthene	mg/kg	<0.1	PASS	**94.4**	**1.6**	**<0.1**
			Benzo(g,h,i)perylene	mg/kg	<0.1	PASS	**89.8**	**1.6**	**<0.1**
			Benzo(k)fluoranthene	mg/kg	<0.1	PASS	**93.2**	**1.6**	**<0.1**
			Chrysene	mg/kg	<0.1	PASS	**103**	**1.6**	**<0.1**
			Dibenz(a,h)anthracene	mg/kg	<0.1	PASS	**93.2**	**1.6**	**<0.1**
			Fluoranthene	mg/kg	<0.1	PASS	**90.2**	**1.7**	**0.2**
			Fluorene	mg/kg	<0.1	PASS	**87.6**	**1.6**	**<0.1**
			Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	PASS	**93.8**	**1.6**	**<0.1**
			Naphthalene	mg/kg	<0.1	PASS	**92.2**	**1.6**	**<0.1**
			Phenanthrene	mg/kg	<0.1	PASS	**100**	**1.6**	**<0.1**
			Pyrene	mg/kg	<0.1	PASS	**99.8**	**1.7**	**0.2**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10693040	BH18-0.1	OCP	a-Endosulphan	mg/kg	<0.05	PASS	**93.2**	**1.6**	**<0.05**
			Aldrin	mg/kg	<0.05	PASS	**114**	**1.6**	**<0.05**
			b-Endosulphan	mg/kg	<0.05	PASS	**96.2**	**1.6**	**<0.05**
			BHC (alpha isomer)	mg/kg	<0.05	PASS	**91.5**	**3.2**	**<0.05**
			BHC (beta isomer)	mg/kg	<0.05	PASS	**74.4**	**2.7**	**<0.05**
			BHC (delta isomer)	mg/kg	<0.05	PASS	**93.1**	**3.2**	**<0.05**
			BHC (gamma isomer) [Lindane]	mg/kg	<0.05	PASS	**81.9**	**3.2**	**<0.05**
			Chlordane	mg/kg	<0.05	PASS	**107**	**3.2**	**<0.05**
			cis-Chlordane	mg/kg	<0.05	PASS	**106**	**1.6**	**<0.05**
			DDD	mg/kg	<0.05	PASS	**104**	**1.6**	**<0.05**
			DDE	mg/kg	<0.05	PASS	**98.2**	**1.6**	**<0.05**
			DDT	mg/kg	<0.05	PASS	**83.4**	**1.6**	**<0.05**
			Dieldrin	mg/kg	<0.05	PASS	**95.0**	**1.6**	**<0.05**
			Endosulfan Sulfate	mg/kg	<0.05	PASS	**95.0**	**1.6**	**<0.05**
			Endrin	mg/kg	<0.05	PASS	**99.2**	**1.6**	**<0.05**
			Endrin Aldehyde	mg/kg	<0.05	PASS	**114**	**1.6**	**<0.05**
			Endrin Ketone	mg/kg	<0.05	PASS	**101**	**1.6**	**<0.05**
			Heptachlor	mg/kg	<0.05	PASS	**105**	**1.6**	**<0.05**
			Heptachlor Epoxide	mg/kg	<0.05	PASS	**104**	**1.6**	**<0.05**
			Hexachlorobenzene	mg/kg	<0.05	PASS	**101**	**2.9**	**<0.05**
			Methoxychlor	mg/kg	<0.05	PASS	**80.4**	**1.6**	**<0.05**

								% Recovery	Expected Value	Sample Value
10693040	BH18-0.1	OCP	trans-Chlordane		mg/kg	<0.05	PASS	**108**	**1.6**	**<0.05**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10621173	NCP	PCB	Aroclor 1016		mg/kg	<0.1	PASS	**114**	**2.5**	**<0.1**
			Aroclor 1260		mg/kg	<0.1	PASS	**99.0**	**2.6**	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10621600	BH3-0.1	CHC	1,2,3,4-Tetrachlorobenzene		mg/kg	<0.1	PASS	**92.8**	**1.3**	**<0.1**
			1,2,3-Trichlorobenzene		mg/kg	<0.1	PASS	**88.0**	**1.3**	**<0.1**
			1,2,4,5-Tetrachlorobenzene		mg/kg	<0.1	PASS	**93.4**	**2.5**	**<0.1**
			1,2,4-Trichlorobenzene		mg/kg	<0.1	PASS	**89.4**	**1.3**	**<0.1**
			1,2-Dichlorobenzene		mg/kg	<0.1	PASS	**91.2**	**1.3**	**<0.1**
			1,3,5-Trichlorobenzene		mg/kg	<0.1	PASS	**90.8**	**1.3**	**<0.1**
			1,3-Dichlorobenzene		mg/kg	<0.1	PASS	**86.6**	**1.3**	**<0.1**
			1,4-Dichlorobenzene		mg/kg	<0.1	PASS	**96.0**	**1.3**	**<0.1**
			2-Chloronaphthalene		mg/kg	<0.1	PASS	**95.6**	**1.3**	**<0.1**
			Benzal Chloride		mg/kg	<0.1	PASS	**85.8**	**1.3**	**<0.1**
			Benzotrichloride		mg/kg	<0.1	PASS	**79.6**	**1.3**	**<0.1**
			Benzylchloride		mg/kg	<0.1	PASS	**86.8**	**1.3**	**<0.1**
			Hexachlorobutadiene		mg/kg	<0.1	PASS	**81.6**	**1.3**	**<0.1**
			Hexachloroethane		mg/kg	<0.1	PASS	**87.0**	**1.3**	**<0.1**
			Pentachlorobenzene		mg/kg	<0.1	PASS	**90.4**	**1.3**	**<0.1**
10621193	BH22-0.1	CHC	1,2,3,4-Tetrachlorobenzene		mg/kg	<0.1	PASS	**75.0**	**1.6**	**<0.1**
			1,2,3-Trichlorobenzene		mg/kg	<0.1	PASS	**77.4**	**1.6**	**<0.1**
			1,2,4,5-Tetrachlorobenzene		mg/kg	<0.1	PASS	**75.9**	**3.2**	**<0.1**
			1,2,4-Trichlorobenzene		mg/kg	<0.1	PASS	**79.4**	**1.6**	**<0.1**
			1,2-Dichlorobenzene		mg/kg	<0.1	PASS	**72.0**	**1.6**	**<0.1**
			1,3,5-Trichlorobenzene		mg/kg	<0.1	PASS	**77.8**	**1.6**	**<0.1**
			1,3-Dichlorobenzene		mg/kg	<0.1	PASS	**67.4**	**1.6**	**<0.1**
			1,4-Dichlorobenzene		mg/kg	<0.1	PASS	**70.2**	**1.6**	**<0.1**
			2-Chloronaphthalene		mg/kg	<0.1	PASS	**98.6**	**1.6**	**<0.1**
			Benzal Chloride		mg/kg	<0.1	PASS	**69.4**	**1.6**	**<0.1**
			Benzotrichloride		mg/kg	<0.1	PASS	**60.6**	**1.6**	**<0.1**
			Benzylchloride		mg/kg	<0.1	PASS	**79.0**	**1.6**	**<0.1**
			Hexachlorobutadiene		mg/kg	<0.1	PASS	**62.2**	**1.6**	**<0.1**
			Hexachlorocyclopentadiene		mg/kg	<0.1	PASS	**59.8**	**1.6**	**<0.1**
			Hexachloroethane		mg/kg	<0.1	PASS	**66.8**	**1.6**	**<0.1**
			Pentachlorobenzene		mg/kg	<0.1	PASS	**71.8**	**1.6**	**<0.1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**				
10621219	BH22-0.1	Phenols(Halo)	2,3,4,6-Tetrachlorophenol		mg/kg	<0.5	PASS	**76.3**	**3.2**	**<0.5**
			2,3,5,6-Tetrachlorophenol		mg/kg	<0.5	PASS	**59.4**	**1.6**	**<0.5**
			2,4,5-Trichlorophenol		mg/kg	<0.5	PASS	**77.6**	**1.6**	**<0.5**
			2,4,6-Trichlorophenol		mg/kg	<0.5	PASS	**68.6**	**1.6**	**<0.5**
			2,6-Dichlorophenol		mg/kg	<0.5	PASS	**90.2**	**1.6**	**<0.5**
			2-Chlorophenol		mg/kg	<0.5	PASS	**79.6**	**1.6**	**<0.5**
			4-Chloro-3-Methylphenol		mg/kg	<0.5	PASS	**94.2**	**1.6**	**<0.5**

							% Recovery	Expected Value	Sample Value
10621219	BH22-0.1	Phenols(Halo)	Pentachlorophenol	mg/kg	<0.5	PASS	**70.6**	**1.6**	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10621591	BH3-0.1	Phenols(NonHalo)	2,4-Dimethylphenol	mg/kg	<0.5	PASS	**88.4**	**1.3**	**<0.5**
			2-Nitrophenol	mg/kg	<0.5	PASS	**87.8**	**1.3**	**<0.5**
			4-Nitrophenol	mg/kg	<0.5	PASS	**86.6**	**1.3**	**<0.5**
			Phenol	mg/kg	<0.5	PASS	**90.2**	**1.3**	**<0.5**
			Total Cresols	mg/kg	<1	PASS	**91.1**	**3.8**	**<1**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10620986	NCP	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**78.1**	**4.8**	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**87.3**	**4.8**	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**105**	**4.8**	**<0.5**
			1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**109**	**4.8**	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**105**	**4.8**	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**109**	**4.8**	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**64.4**	**4.8**	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**102**	**4.8**	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**116**	**4.8**	**<0.5**
			1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**98.6**	**4.8**	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**111**	**4.8**	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**112**	**4.8**	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**78.6**	**4.8**	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**72.4**	**4.8**	**<0.5**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**54.9**	**4.8**	**<0.5**
			2-Chlorotoluene	mg/kg	<0.5	PASS	**116**	**4.8**	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**109**	**4.8**	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**114**	**4.8**	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**109**	**4.8**	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**82.0**	**4.8**	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**71.5**	**4.8**	**<0.5**
			Carbon Tetrachloride	mg/kg	<0.5	PASS	**76.3**	**4.8**	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**116**	**4.8**	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**73.2**	**4.8**	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**109**	**4.8**	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**107**	**4.8**	**<0.5**
			Trichloroethene	mg/kg	<0.5	PASS	**110**	**4.8**	**<0.5**
10625104	BH18-0.1	HVOL	1,1- Dichloroethane	mg/kg	<0.5	PASS	**98.4**	**5.1**	**<0.5**
			1,1,1,2-Tetrachloroethane	mg/kg	<0.5	PASS	**88.1**	**5.1**	**<0.5**
			1,1,1-Trichloroethane	mg/kg	<0.5	PASS	**101**	**5.1**	**<0.5**
			1,1,2,2-Tetrachloroethane	mg/kg	<0.5	PASS	**92.6**	**5.1**	**<0.5**

							% Recovery	Expected Value	Sample Value
10625104	BH18-0.1	HVOL	1,1,2-Trichloroethane	mg/kg	<0.5	PASS	**92.1**	**5.1**	**<0.5**
			1,1-Dichloroethene	mg/kg	<0.5	PASS	**103**	**5.1**	**<0.5**
			1,1-Dichloropropene	mg/kg	<0.5	PASS	**85.4**	**5.1**	**<0.5**
			1,2,3-Trichloropropane	mg/kg	<0.5	PASS	**98.2**	**5.1**	**<0.5**
			1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	PASS	**74.5**	**5.1**	**<0.5**
			1,2-Dibromoethane	mg/kg	<0.5	PASS	**89.8**	**5.1**	**<0.5**
			1,2-Dichloroethane	mg/kg	<0.5	PASS	**104**	**5.1**	**<0.5**
			1,2-Dichloroethene [cis]	mg/kg	<0.5	PASS	**87.2**	**5.1**	**<0.5**
			1,2-Dichloroethene [trans]	mg/kg	<0.5	PASS	**90.2**	**5.1**	**<0.5**
			1,2-Dichloropropane	mg/kg	<0.5	PASS	**93.7**	**5.1**	**<0.5**
			1,3-Dichloropropane	mg/kg	<0.5	PASS	**96.1**	**5.1**	**<0.5**
			1,3-Dichloropropene [cis]	mg/kg	<0.5	PASS	**73.8**	**5.1**	**<0.5**
			1,3-Dichloropropene [trans]	mg/kg	<0.5	PASS	**64.4**	**5.1**	**<0.5**
			2,2-Dichloropropane	mg/kg	<0.5	PASS	**87.7**	**5.1**	**<0.5**
			2-Chlorotoluene	mg/kg	<0.5	PASS	**90.7**	**5.1**	**<0.5**
			4-Chlorotoluene	mg/kg	<0.5	PASS	**85.3**	**5.1**	**<0.5**
			Bromobenzene	mg/kg	<0.5	PASS	**83.6**	**5.1**	**<0.5**
			Bromochloromethane	mg/kg	<0.5	PASS	**102**	**5.1**	**<0.5**
			Bromodichloromethane	mg/kg	<0.5	PASS	**94.0**	**5.1**	**<0.5**
			Bromoform (Tribromomethane)	mg/kg	<0.5	PASS	**83.4**	**5.1**	**<0.5**
			Carbon Tetrachloride	mg/kg	<0.5	PASS	**102**	**5.1**	**<0.5**
			Chlorobenzene	mg/kg	<0.5	PASS	**90.3**	**5.1**	**<0.5**
			Chloroform (Trichloromethane)	mg/kg	<0.5	PASS	**107**	**5.1**	**<0.5**
			Dibromochloromethane	mg/kg	<0.5	PASS	**81.0**	**5.1**	**<0.5**
			Dibromomethane	mg/kg	<0.5	PASS	**97.6**	**5.1**	**<0.5**
			Dichloromethane	mg/kg	<1	PASS	**103**	**5.1**	**<1**
			Tetrachloroethene	mg/kg	<0.5	PASS	**89.6**	**5.1**	**<0.5**
			Trichloroethene	mg/kg	<0.5	PASS	**98.3**	**5.1**	**<0.5**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10631354	NCP	MS Total Metals	Antimony	mg/L	<0.001	PASS	**99.6**	**0.040**	**<0.001**
			Arsenic	mg/L	<0.001	PASS	**99.7**	**0.040**	**<0.001**
			Barium	mg/L	<0.001	PASS	**108**	**0.074**	**0.034**
			Beryllium	mg/L	<0.001	PASS	**89.2**	**0.040**	**<0.001**
			Boron	mg/L	<0.02	PASS	**91.7**	**0.058**	**<0.02**
			Cadmium	mg/L	<0.0002	PASS	**102**	**0.040**	**<0.0002**
			Chromium	mg/L	<0.001	PASS	**92.1**	**0.040**	**<0.001**
			Cobalt	mg/L	<0.001	PASS	**93.1**	**0.040**	**<0.001**
			Copper	mg/L	<0.001	PASS	**90.3**	**0.052**	**0.012**
			Iron	mg/L	<0.01	PASS	**99.0**	**0.044**	**<0.01**
			Lead	mg/L	<0.001	PASS	**102**	**0.041**	**0.001**
			Manganese	mg/L	<0.001	PASS	**96.0**	**0.041**	**<0.001**
			Mercury	mg/L	<0.0001	PASS	**81.0**	**0.00021**	**<0.0001**
			Molybdenum	mg/L	<0.001	PASS	**99.9**	**0.040**	**<0.001**
			Nickel	mg/L	<0.001	PASS	**91.2**	**0.041**	**<0.001**

							% Recovery	Expected Value	Sample Value
10631354	NCP	MS Total Metals	Selenium	mg/L	<0.001	PASS	**104**	**0.040**	**<0.001**
			Silver	mg/L	<0.001	PASS	**71.0**	**0.020**	**<0.001**
			Tin	mg/L	<0.001	PASS	**107**	**0.040**	**<0.001**
			Zinc	mg/L	<0.001	PASS	**98.0**	**0.043**	**0.003**
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**	**Units**	**LOR**	**Pass/Fail**			
10651589	BH15-0.1	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**89.3**	**0.0024**	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**93.1**	**0.0024**	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**98.9**	**0.0024**	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**96.9**	**0.0024**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**99.5**	**0.0063**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**80.4**	**0.0026**	**<0.0002**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**86.0**	**0.0062**	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**97.3**	**0.0063**	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**89.8**	**0.0025**	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**95.7**	**0.0062**	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**92.9**	**0.0022**	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**76.8**	**0.013**	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**81.8**	**0.0024**	**<0.0002**
			Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**81.2**	**0.0025**	**<0.0002**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**111**	**0.0025**	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**83.4**	**0.0025**	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**98.3**	**0.0024**	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**105**	**0.0025**	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**83.4**	**0.0025**	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**92.1**	**0.0025**	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**99.9**	**0.0027**	**0.0005**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**85.2**	**0.0026**	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**91.6**	**0.0025**	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**93.8**	**0.0062**	**<0.0005**
			Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**80.6**	**0.0025**	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**104**	**0.0025**	**<0.0002**
10649136	NCP	PFAS	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	<0.0005	PASS	**76.1**	**0.0012**	**<0.0005**
			4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	<0.0005	PASS	**93.6**	**0.0012**	**<0.0005**
			6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	<0.0005	PASS	**90.5**	**0.0012**	**<0.0005**
			8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	<0.0005	PASS	**98.1**	**0.0012**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**99.7**	**0.0031**	**<0.0005**
			N-Ethyl perfluorooctane sulfonamidoacetic	mg/kg	<0.0002	PASS	**86.8**	**0.0012**	**<0.0002**
			N-Ethyl perfluorooctane	mg/kg	<0.0005	PASS	**76.5**	**0.0031**	**<0.0005**
			N-Methyl perfluorooctane sulfonamide (	mg/kg	<0.0005	PASS	**94.9**	**0.0031**	**<0.0005**
			N-Methyl perfluorooctane	mg/kg	<0.0002	PASS	**90.9**	**0.0013**	**<0.0002**
			N-Methyl perfluorooctane	mg/kg	<0.0005	PASS	**84.6**	**0.0031**	**<0.0005**
			Perfluorobutane sulfonic acid (PFBS)	mg/kg	<0.0002	PASS	**91.7**	**0.0012**	**<0.0002**
			Perfluorobutanoic acid (PFBA)	mg/kg	<0.001	PASS	**75.1**	**0.0062**	**<0.001**
			Perfluorodecane sulfonic acid (PFDS)	mg/kg	<0.0002	PASS	**81.3**	**0.0012**	**<0.0002**

							% Recovery	Expected Value	Sample Value
10649136	NCP	PFAS	Perfluorodecanoic acid (PFDA)	mg/kg	<0.0002	PASS	**81.6**	**0.0013**	**<0.0002**
			Perfluorododecanoic acid (PFDoDA)	mg/kg	<0.0002	PASS	**107**	**0.0013**	**<0.0002**
			Perfluoroheptanoic acid (PFHpA)	mg/kg	<0.0002	PASS	**81.2**	**0.0013**	**<0.0002**
			Perfluorohexane sulfonic acid (PFHxS)	mg/kg	<0.0002	PASS	**94.6**	**0.0012**	**<0.0002**
			Perfluorohexanoic acid (PFHxA)	mg/kg	<0.0002	PASS	**101**	**0.0013**	**<0.0002**
			Perfluorononanoic acid (PFNA)	mg/kg	<0.0002	PASS	**81.3**	**0.0013**	**<0.0002**
			Perfluorooctane sulfonamide (FOSA)	mg/kg	<0.0002	PASS	**87.4**	**0.0013**	**<0.0002**
			Perfluorooctane sulfonic acid (PFOS)	mg/kg	<0.0002	PASS	**80.9**	**0.0012**	**<0.0002**
			Perfluorooctanoic acid (PFOA)	mg/kg	<0.0002	PASS	**83.5**	**0.0013**	**<0.0002**
			Perfluoropentanoic acid (PFPeA)	mg/kg	<0.0002	PASS	**86.7**	**0.0013**	**<0.0002**
			Perfluorotetradecanoic acid (PFTeDA)	mg/kg	<0.0005	PASS	**100**	**0.0031**	**<0.0005**
			Perfluorotridecanoic acid (PFTrDA)	mg/kg	<0.0002	PASS	**78.4**	**0.0013**	**<0.0002**
			Perfluoroundecanoic acid (PFUnDA)	mg/kg	<0.0002	PASS	**100**	**0.0013**	**<0.0002**

Measurement of Uncertainty.

When any measurement is made there are a number of factors that affect how accurate the result is . Every step undertaken in the analysis of a sample is subject to some (small) level of error. Estimates of measurement uncertainty provide information about the relative size of the error. As such, MU is an important aspect of any result. Refer to Enviromail™ 53 - What is Measurement Uncertainty for more information.

Analysis	Method Code	Component	Location
			MEL
S-CN	WK026SF	CYANIDE	**20%**
S-FLUORIDE	QWI-EN.WK040T	FLUORIDE_SED	**22%**
S-OOC	WP004	OOC	**20%**

Analysis	Method Code	Component	Location
			MEL
S-MSTOT1	WG020B	AG	**19%**
		AS	**20%**
		B	**14%**
		BA	**17%**
		BE	**15%**
		CD	**10%**
		CO	**16%**
		CR	**18%**
		CU	**16%**
		FE	**20%**
		HG	**23%**
		MN	**19%**
		MO	**13%**
		NI	**16%**

			MEL
S-MSTOT1	WG020B	PB	**12%**
		SB	**16%**
		SE	**21%**
		SN	**11%**
		ZN	**22%**
W-MSTOT-L	WG020A	AG	**24%**
		AS	**12%**
		B	**16%**
		BA	**12%**
		BE	**13%**
		CD	**10%**
		CO	**10%**
		CR	**10%**
		CU	**10%**
		FE	**14%**
		HG	**18%**
		MN	**10%**
		MO	**10%**
		NI	**10%**
		PB	**11%**
		SB	**12%**
		SE	**16%**
		SN	**10%**

			MEL
W-MSTOT-L	WG020A	ZN	**14%**

Analysis	*Method Code*	*Component*	*Location*
			MEL
S-CL-DA	WD045G	S-CHLORIDE(DA)	**20%**
S-SO4-DA	WD041G	S-SO4-DA	**20%**
S-TOTCR6DA	EG048G	TOTAL CHROMIUM 6+	**20%**

Analysis	Method Code	Component	Location
			MEL
S-CHC	WP084	1234TETRACHLOROBENZENE	**24%**
		123TRICHLOROBENZENE	**31%**
		1245TETRACHLOROBENZENE	**25%**
		124TRICHLOROBENZENE	**32%**
		12-DICHLOROBENZENE	**18%**
		135TRICHLOROBENZENE	**22%**
		13-DICHLOROBENZENE	**21%**
		14-DICHLOROBENZENE	**20%**
		2 CHLORONAPHTHALENE	**22%**
		BENZAL CHLORIDE	**15%**
		BENZOTRICHLORIDE	**27%**
		BENZYLCHLORIDE	**18%**
		HEXACHLOROBUTADIENE	**27%**
		HEXACHLOROCYCLOPENTADIENE	**30%**
		HEXACHLOROETHANE	**24%**
		PENTACHLOROBENZENE	**33%**
S-EP231	EP231X	10:2 FLUOROTELOMER SULFONIC ACID	**25%**
		4:2 FLUOROTELOMER SULFONIC ACID	**26%**
		6:2 FLUOROTELOMER SULFONIC ACID	**25%**
		8:2 FLUOROTELOMER SULFONIC ACID	**25%**
		EtFOSAA	**25%**
		EtFOSE	**31%**

			MEL
S-EP231	EP231X	MeFOSAA	**27%**
		MeFOSE	**25%**
		N-ETHYL PERFLUOROOCTANE SULFONAMIDE	**25%**
		N-METHYL PERFLUOROOCTANE SULFONAMIDE	**25%**
		PERFLUOROBUTANE SULFONIC ACID (PFBS)	**25%**
		PERFLUOROBUTANOIC ACID (PFBA)	**25%**
		PERFLUORODECANE SULFONIC ACID (PFDS)	**25%**
		PERFLUORODECANOIC ACID (PFDA)	**25%**
		PERFLUORODODECANOIC ACID (PFDoDA)	**25%**
		PERFLUOROHEPTANE SULFONIC ACID (PFHpS)	**25%**
		PERFLUOROHEPTANOIC ACID (PFHpA)	**25%**
		PERFLUOROHEXANE SULFONIC ACID (PFHxS)	**25%**
		PERFLUOROHEXANOIC ACID (PFHxA)	**25%**
		PERFLUORONONANOIC ACID (PFNA)	**32%**
		PERFLUOROOCTANE SULFONAMIDE (FOSA)	**25%**
		PERFLUOROOCTANE SULFONIC ACID (PFOS)	**28%**
		PERFLUOROOCTANOIC ACID (PFOA)	**27%**
		PERFLUOROPENTANE SULFONIC ACID (PFPeS)	**25%**
		PERFLUOROPENTANOIC ACID (PFPeA)	**25%**
		PERFLUOROTETRADECANOIC ACID (PFTeDA)	**25%**
		PERFLUOROTRIDECANOIC ACID (PFTrDA)	**30%**
		PERFLUOROUNDECANOIC ACID (PFUnDA)	**25%**
S-HVOL	WP074	1112TCAN	**15%**

			MEL
S-HVOL	WP074	111TCANE	**20%**
		1122TCAN	**21%**
		112TCANE	**18%**
		11DCANE	**26%**
		11DCENE	**26%**
		11DCPENE	**23%**
		123TCPAN	**22%**
		12DB3CLP	**16%**
		12DBRANE	**15%**
		12DCENEC	**29%**
		12DCENET	**29%**
		12DCLANE	**26%**
		12DCLPANE	**24%**
		13DCLPANE	**19%**
		13DCLPRC	**15%**
		13DCLPRT	**22%**
		22DCPANE	**21%**
		2CLTOL	**15%**
		4CLTOL	**16%**
		BCLMANE	**26%**
		BDCMANE	**22%**
		BRBENZ	**15%**
		BROMOFOR	**19%**

			MEL
S-HVOL	WP074	CARTET	**19%**
		CHCL3	**24%**
		CHLOBENZ	**17%**
		DBCLMANE	**15%**
		DBMANE	**26%**
		DCM	**26%**
		TCLFMANE	**28%**
		TETCENE	**19%**
		TRICENE	**27%**
		VCL	**32%**
S-MAH	WP125 & WP074	124-TRIMETHYLBENZENE/TMB	**18%**
		BENZENE	**25%**
		CUMENE/ISOPROPYL BENZENE/EMB	**20%**
		ETHYL BENZENE	**19%**
		STYRENE	**21%**
		TOLUENE	**18%**
		XYLENES	**19%**
S-OCP1	WP068A	A-BHC	**22%**
		A-ENDOSULPHAN	**24%**
		ALDRIN	**27%**
		B-BHC	**26%**
		B-ENDOSULPHAN	**24%**
		C-CHLORDANE	**23%**

			MEL
S-OCP1	WP068A	CHLORDANE	**22%**
		D-BHC	**29%**
		DDD	**27%**
		DDE	**16%**
		DDT	**29%**
		DIELDRIN	**23%**
		ENDOSULFAN SULPHATE	**28%**
		ENDRIN	**29%**
		ENDRIN ALDEHYDE	**31%**
		ENDRIN KETONE	**24%**
		HEPTACHLOR	**22%**
		HEPTACHLOREPOXIDE	**22%**
		HEXACHLOROBENZENE	**20%**
		LINDANE	**23%**
		METHOXYCHLOR	**41%**
		OXYCHLORDANE	**20%**
		TRANS-CHLORDANE	**21%**
S-PAH	WP075B	ACENAPHTHENE	**18%**
		ACENAPHTHYLENE	**17%**
		ANTHRACENE	**18%**
		BENZ(A)ANTHRACENE	**27%**
		BENZO(A)PYRENE	**21%**
		BENZO(B)FLUORANTHENE	**25%**

			MEL
S-PAH	WP075B	BENZO(GHI)PERYLENE	**31%**
		BENZO(K)FLUORANTHENE	**22%**
		CHRYSENE	**21%**
		DIBENZ(AH)ANTHRACENE	**27%**
		FLUORANTHENE	**26%**
		FLUORENE	**15%**
		INDENO(123-CD)PYRENE	**23%**
		NAPHTHALENE	**15%**
		PHENANTHRENE	**19%**
		PYRENE	**27%**
S-PCB1	WP066	AROCLOR 1016	**19%**
		AROCLOR 1260	**23%**
S-PHENHAL	WP075A	2345 TETRACHLOROPHENOL	**20%**
		2346 TETRACHLOROPHENOL	**15%**
		2356 TETRACHLOROPHENOL	**16%**
		245-TRICHLOROPHENOL	**20%**
		246-TRICHLOROPHENOL	**18%**
		24-DICHLOROPHENOL	**19%**
		26-DICHLOROPHENOL	**17%**
		2-CHLOROPHENOL	**17%**
		4-CHLORO-3-METHYLPHENOL	**17%**
		PENTACHLOROPHENOL	**29%**
S-PHENOHAL	WP075A	24-DIMETHYL PHENOL	**16%**

			MEL
S-PHENOHAL	WP075A	2-METHYL-46-DINITROPHENOL	**20%**
		2-NITROPHENOL	**19%**
		4-NITROPHENOL	**16%**
		DINOSEB	**20%**
		PHENOL	**18%**
		TOTAL CRESOLS	**26%**
S-TRHSV	WP071	TPH C15-C28	**26%**
		TRH>C16-C34	**27%**
S-TRHV	WP074 (F1 not NATA)	TPH_C6-C9	**23%**
		TRH_C6-C10	**21%**
		TRH_C6-C10 minus BTEX	**21%**

Analysis	*Method Code*	*Component*	*Location*

CERTIFICATE OF ANALYSIS

Work Order	: **EM2422187**	Page	: 1 of 6
Client	: **ALS WATER AND HYDROGRAPHICS PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: TUYEN NGUYEN	Contact	: Customer Services EM
Address	: 22 DALMORE DRIVE SCORESBY VIC, AUSTRALIA 3179	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 8756 8000	Telephone	: +61 3 8549 9600
Project	: 24-73137	Date Samples Received	: 13-Dec-2024 10:45
Order number	: ----	Date Analysis Commenced	: 18-Dec-2024
C-O-C number	: ----	Issue Date	: 19-Dec-2024 15:19
Sampler	: ----		
Site	: ----		
Quote number	: EN/109/18 Scoresby for EM batches_V3		
No. of samples received	: 16		
No. of samples analysed	: 16		

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

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*
Brendan Schrader	Laboratory 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.

- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- 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
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- 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: 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
- 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	10606000	10606021	10606025	10606036	10606039
			Sampling date / time	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EM2422187-001	EM2422187-002	EM2422187-003	EM2422187-004	EM2422187-005
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
Sample weight (dry)	----	0.01	g	34.7	68.4	82.4	29.4	56.5
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	10606042	10606045	10606048	10606054	10606060
			Sampling date / time	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EM2422187-006	EM2422187-007	EM2422187-008	EM2422187-009	EM2422187-010
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
Sample weight (dry)	----	0.01	g	53.9	66.2	32.8	33.9	34.4
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	10606064	10606068	10606071	10606075	10606078
			Sampling date / time	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00	10-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EM2422187-011	EM2422187-012	EM2422187-013	EM2422187-014	EM2422187-015
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
Sample weight (dry)	----	0.01	g	112	28.5	42.7	55.5	50.0
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	10606080	----	----	----	----
				Sampling date / time	10-Dec-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2422187-016	--------	--------	--------	--------
					Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		**No**	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-		**No**	----	----	----	----
Asbestos Type	1332-21-4	-	--		**-**	----	----	----	----
Synthetic Mineral Fibre	----	-	--		**No**	----	----	----	----
Organic Fibre	----	-	--		**No**	----	----	----	----
Sample weight (dry)	----	0.01	g		**42.9**	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		**B.SCHRADER**	----	----	----	----

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	10606000 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606021 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606025 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606036 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606039 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606042 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606045 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606048 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606054 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606060 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606064 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606068 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606071 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606075 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606078 - 10-Dec-2024 00:00	A soil sample.
EA200: Description	10606080 - 10-Dec-2024 00:00	A soil sample.

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

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☐ **Sydney**
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☑ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: enquiries.melb@mgtlabmark.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : A.S. James Pty Ltd	**Contact Name : Rory Summerville**	**Purchase Order :**	**COC Number :**
Office Address : 15 Libbett Avenue, Clayton South 3169	**Project Manager :**	**PROJECT Number : 123072 E1**	**Eurofins | mgt quote ID :**
	Email for results : rorys@asjames.com.au	**PROJECT Name :**	**Data output format:**

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	OCPs	On Hold
1	Dup-BH7-0.1	10/12/24	Soil	X	
2	Dup-BH5-1.0	10/12/24	Soil	X	
3	Dup-BH16-1.0	10/12/24	Soil		X
4	Dup-BH20-1.0	11/12/24	Soil	X	
5					
6					
7					
8					
9					
10					
11					
12					
13					

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14
Heavy Metals	6 months	Heavy Metals	6 r
Mercury, CrVI	28 days	Mercury, CrVI	28
Microbiological testing	24 hours	Microbiological testing	72
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24
Ferrous iron	7 days	ASLP, TCLP	7 c

Containers:

1LP	250P	125P	1LA	40mL vial	125mL A	Jar	

Sample comment

Relinquished By: Rory Summerville	**Received By:**	**Turn around time**
Date & Time : 11th of December 2024	**Date & Time :**	1 DAY ☐ 2 DAY ☐ 3 DAY ☐
Signature:	**Signature:**	5 DAY ☑ 10 DAY ☐ Other:

Laboratory Staff

Method Of Shipment

☐ Courier
☑ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arriva

Report number:

170414

Outlook

123072 E1

From Rory Summerville <rorys@asjames.com.au>
Date Wed 11/12/24 3:03 PM
To SH_AU_CAU001_EnviroSampleVic <EnviroSampleVic@eurofinsanz.com>

1 attachment (92 KB)
123072 E1 Eurofins COC.pdf;

Unverified Sender: The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Hi

CoC attached for soil samples dropped by earlier today, normal T/A required, thanks.

Best regards

Rory Summerville
BEng Civil (Hons), MSc Env Eng, MEIANZ, MIEAust
Senior Environmental Engineer
(03) 9547 4811

A.S.JAMES PTY LTD
ACN 004 584 534 ABN 40 004 584 534
Geotechnical Engineers
SINCE 1963

HEAD OFFICE
15 Libbett Avenue
Clayton South VIC 3169
t: 03 9547 4811
e: melb@asjames.com.au

BALLARAT LABORATORY
73-77 Humffray Street North
Ballarat East VIC 3350
t: 03 5333 5911
e: ballarat@asjames.com.au

CLAYTON LABORATORY
1/16 Libbett Avenue
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#1170414

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PROJECT INFORMATION

Date Received: 11/12/24

Company: AJ

Contact person: -

Contact Number: -

Contact E-mail: -

Project Name/site: -

Project Number: -

COC: Attached ☐
E-mailed ☐
Not received ☒

DATE: 11/12/24
TIME: 1:55
TEMPERATURE: 3.1°C
ATTEMPT TO CHILL: YES NO

#1170414

Last modified on: 16 October 2019	Approved on: 16 October 2019	Version: QS1039_R2
Last modified by: H. Le	Approver: M. Makarios	Page 1 of 1
Editorial Committee: T. Lakeland, F. Sanjaya, H. Le, M. Makarios		Next required review date: 16 October 2022

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www.eurofins.com.au EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

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NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: AS James
Contact name: - Rory Summerville
Project name: Not provided
Project ID: 123072 E1
Turnaround time: 10 Day
Date/Time received Dec 11, 2024 3:03 PM
Eurofins reference 1170414

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	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.
X	Split sample sent to requested external lab.
X	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:

Savini Suduweli on phone : +61 3 8564 5051 or by email: Savini.Suduwelikondage@eurofinsanz.com

Results will be delivered electronically via email to - Rory Summerville - rorys@asjames.com.au.

Note: A copy of these results will also be delivered to the general AS James email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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

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Site# 2370 & 2554

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NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: AS James
Address: 15 Libbett Ave
Clayton South
VIC 3169

Project Name:
Project ID: 123072 E1

Order No.:
Report #: 1170414
Phone: 9547 4811
Fax: 9547 5393

Received: Dec 11, 2024 3:03 PM
Due: Dec 27, 2024
Priority: 10 Day
Contact Name: - Rory Summerville

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Organochlorine Pesticides	Moisture Set
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	DUP-BH7-0.1	Dec 10, 2024		Soil	M24-De0030632		X	X
2	DUP-BH5-1.0	Dec 10, 2024		Soil	M24-De0030633		X	X
3	DUP-BH20-1.0	Dec 11, 2024		Soil	M24-De0030634		X	X
4	DUP-BH16-1.0	Dec 10, 2024		Soil	M24-De0030635	X		
Test Counts						1	3	3

AS James
15 Libbett Ave
Clayton South
VIC 3169

NATA Accredited
Accreditation Number 1261
Site Number 1254

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: **- Rory Summerville**

Report **1170414-S**
Project name
Project ID 123072 E1
Received Date Dec 11, 2024

Client Sample ID			**DUP-BH7-0.1**	**DUP-BH5-1.0**	**DUP-BH20-1.0**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M24-De0030632**	**M24-De0030633**	**M24-De0030634**
Date Sampled			**Dec 10, 2024**	**Dec 10, 2024**	**Dec 11, 2024**
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	117	101	116
Tetrachloro-m-xylene (surr.)	1	%	74	84	63
Sample Properties					
% Moisture	1	%	10	22	23

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
Organochlorine Pesticides	Melbourne	Dec 15, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
% Moisture	Melbourne	Dec 12, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Company Name: AS James
Address: 15 Libbett Ave
Clayton South
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Project Name:
Project ID: 123072 E1

Order No.:
Report #: 1170414
Phone: 9547 4811
Fax: 9547 5393

Received: Dec 11, 2024 3:03 PM
Due: Dec 27, 2024
Priority: 10 Day
Contact Name: - Rory Summerville

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						HOLD*	Organochlorine Pesticides	Moisture Set
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	DUP-BH7-0.1	Dec 10, 2024		Soil	M24-De0030632		X	X
2	DUP-BH5-1.0	Dec 10, 2024		Soil	M24-De0030633		X	X
3	DUP-BH20-1.0	Dec 11, 2024		Soil	M24-De0030634		X	X
4	DUP-BH16-1.0	Dec 10, 2024		Soil	M24-De0030635	X		
Test Counts						1	3	3

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 (*bis*-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							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	106			70-130	Pass	
4.4'-DDD	%	105			70-130	Pass	
4.4'-DDE	%	100			70-130	Pass	
4.4'-DDT	%	126			70-130	Pass	
a-HCH	%	99			70-130	Pass	
Aldrin	%	91			70-130	Pass	
b-HCH	%	99			70-130	Pass	
d-HCH	%	102			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	102			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	93			70-130	Pass	
Endrin	%	111			70-130	Pass	
Endrin aldehyde	%	124			70-130	Pass	
Endrin ketone	%	100			70-130	Pass	
g-HCH (Lindane)	%	99			70-130	Pass	
Heptachlor	%	123			70-130	Pass	
Heptachlor epoxide	%	91			70-130	Pass	
Hexachlorobenzene	%	95			70-130	Pass	
Methoxychlor	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M24-De0035376	NCP	%	89			70-130	Pass	
4.4'-DDD	M24-De0035376	NCP	%	98			70-130	Pass	
4.4'-DDE	M24-De0035376	NCP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDT	M24-De0035376	NCP	%	96			70-130	Pass	
a-HCH	M24-De0035376	NCP	%	92			70-130	Pass	
Aldrin	M24-De0035376	NCP	%	95			70-130	Pass	
b-HCH	M24-De0035376	NCP	%	87			70-130	Pass	
d-HCH	M24-De0035376	NCP	%	89			70-130	Pass	
Dieldrin	M24-De0035376	NCP	%	97			70-130	Pass	
Endosulfan I	M24-De0035376	NCP	%	105			70-130	Pass	
Endosulfan II	M24-De0035376	NCP	%	96			70-130	Pass	
Endosulfan sulphate	M24-De0035376	NCP	%	85			70-130	Pass	
Endrin	M24-De0035376	NCP	%	81			70-130	Pass	
Endrin aldehyde	M24-De0035376	NCP	%	86			70-130	Pass	
Endrin ketone	M24-De0035376	NCP	%	118			70-130	Pass	
g-HCH (Lindane)	M24-De0035376	NCP	%	91			70-130	Pass	
Heptachlor	M24-De0035376	NCP	%	93			70-130	Pass	
Heptachlor epoxide	M24-De0035376	NCP	%	85			70-130	Pass	
Hexachlorobenzene	M24-De0035376	NCP	%	88			70-130	Pass	
Methoxychlor	M24-De0035376	NCP	%	100			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M24-De0027323	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M24-De0027323	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M24-De0027323	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	M24-De0030632	CP	%	10	9.7	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

Authorised by:

Savini Suduweli	Analytical Services Manager
Edward Lee	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.

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APPENDIX D

Tabulated Results Screened against Adopted Criteria

A.S.JAMES PTY LTD
A.C.N. 004 584 534 A.B.N. 40 004 584 534
Geotechnical Engineers
SINCE 1963

Site:	Woolamai to Nyora Rail Trail - Woolamai Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium III	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	100	-	-	-	-	420	-	-	45	-	1135	-	-	-	185	-	-	-	500
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	20	-	-	4	-	10 [10] / 22 [11]	-	0.4	50 [10] / 300 [11]	-	-	-	-	6.6	10 [10] / 40 [11]	-	-	20	50 [10] / 300 [11]	-
NEPM 2013 HILs C	-	300	-	90	20000	90	-	300	300	17000	-	600	19000	80	-	1200	700	-	-	30000
NEPM 2013 HILs D	-	3000	-	500	300000	900	-	3600	4000	240000	-	1500	60000	730	-	6000	10000	-	-	400000
Industrial Equivalent International Environmental Quality Standard	40 [3]	-	-	8 [3]	-	-	18000000 [2]	-	-	-	820000 [2]	-	-	-	40 [3]	-	-	40 [3]	300 [3]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																
Insitu Soils																				
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<5	56	10	<5	<10	<0.2	<5	<1	<5	<5	1200	<5	11	0.06	<5	<5	<3	<5	<5	<5
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	<5	60	<5	<10	<0.2	<5	-	<5	15	6500	42	250	0.06	<5	5	<3	<5	<5	76
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	7	46	<5	<10	<0.2	10	<1	<5	5	4900	18	71	0.07	<5	9	<3	<5	<5	13
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	42	56	<5	<10	0.4	15	-	<5	21	20000	78	130	0.06	<5	16	<3	<5	<5	170
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	6	29	<5	<10	<0.2	<5	-	<5	<5	5800	6	14	<0.05	<5	<5	<3	<5	<5	8
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	<5	<5	53	<5	<10	<0.2	<5	-	<5	<5	4900	5	12	0.06	<5	<5	<3	<5	<5	5
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	140	91	<5	12	<0.2	24	<1	7	31	17000	84	220	0.07	<5	34	<3	<5	25	35
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	<5	40	<5	<10	<0.2	6	<1	<5	<5	9700	9	63	<0.05	<5	<5	<3	<5	<5	19

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested

A.S.JAMES PTY LTD
A.C.N. 004 584 534 A.B.N. 40 004 584 534
Geotechnical Engineers
SINCE 1963

Site: Woolamai to Nyora Rail Trail - Woolamai Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	*Monocyclic Aromatic Hydrocarbons (MAHs)*								*Total Recoverable Hydrocarbons (TRHs)*					*Total Petroleum Hydrocarbons (TPHs)*						*Polyaromatic Hydrocarbons (PAHs)*																		
	Benzene	Toluene	Ethylbenzene	Xylene	Isopropylbenzene (Cumene)	Styrene	1,2,4- trimethylbenzene	Total Monocyclic Hydrocarbons	F1 C6-C10 less BTEX	F2 C10-C16 less Naphthalene	F3 C16-C34	F4 C34-C40	Total Recoverable Hydrocarbons	TPHs C6-C9	TPHs C10-C14	TPHs C15-C28	TPHs C29-C36	TPHs C10-C36	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total Polyaromatic Hydrocarbons	Total Carcinogenic PAHS (as B[a]P TEQ)
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	50	85	70	105	-	-	-	-	180	120	300	2800	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	18 [2]	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	0.5, 0.6, 0.7	160, 390, 480	55, NL, NL	40, 95, 110	-	-	-	-	45, 40, 50	110, 230, 280	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3, 4, 5	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	0.5, 0.7, 1	220, NL, NL	NL	60, 210, 310	-	-	-	-	70, 65, 90	240, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	0.5, 1, 2	310, NL, NL	NL	95, NL, NL	-	-	-	-	110, 100, 150	440, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - +4m Sand, Silt, Clay	0.5, 2, 3	540, NL, NL	NL	170, NL, NL	-	-	-	-	200, 190, 290	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	3, 4, 6	NL	NL	230, NL, NL	-	-	-	-	280, 250, 310	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	3, 5, 6	NL	NL	NL	-	-	-	-	370, 360, 480	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	3, 6, 9	NL	NL	NL	-	-	-	-	630, 590, NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - +4m Sand, Silt, Clay	3, 10, 20	NL	NL	NL	-	-	-	-	NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 0m to <2m Sand, Silt, Clay	77, 180, 350	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 2m to <4m Sand, Silt, Clay	160, NL, NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 4m+ Sand, Silt, Clay	NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 HSL for Direct ontact by Intrusive Maintenance Worker	1100	120000	85000	130000	-	-	-	-	82000	62000	85000	120000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29000	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	300	3
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	4000	40
Industrial Equivalent International Environmental Quality Standard	-	-	-	-	9900 [7]	50 [3]	210 [7]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits for TRH Fractions F1-F4 (Coarse / Fine) - Commercial / Industrial	-	-	-	-	-	-	-	-	700 / 800	1000 / 1000	3500 / 5000	10000 / 10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																																	
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	31	260	74	360	<20	<20	110	210	320	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	120	<50	120	<20	<20	<50	92	92	<0.1	<0.1	0.1	1.9	2.4	2	1.6	1.6	1.9	0.4	1.8	<0.1	1.7	<0.1	0.5	1.8	18	2.4
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	120	<50	120	<20	<20	59	81	140	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	58	<50	58	<20	<20	<50	54	54	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	55	870	85	520	<20	<20	210	220	430	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	<0.1	<0.1	0.1	0.2	0.2	0.9	<0.1
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	120	<50	120	<20	<20	<50	110	110	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists. Canadian Criteria adopted in absence of Australian criteria. USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Region 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministrv of Housina. Spatial Plannina & the Environment (VROMI (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
[13] *CRC Care Technical Report 10 - Health screenina levels for petroleum hydrocarbons in soil and aroundwater*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B

- Indicates not tested
14 Total is sum of reported positive concentrations for MAHs - Total sum of benzene, toluene, ethyl benzene, xylenes (includes ortho, para and meta xylenes) and styrene
15 Total is sum of reported positive concentrations for PAHs - Total sum of naphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene and pyrene

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Site:	Woolamai to Nyora Rail Trail - Woolamai Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Organochlorine & Organophosphate Pesticides (OCPs & OPPs)*																	*Herbicides*						*Insecticide*	
					Aldrin	Dieldrin	Aldrin + Dieldrin	Atrazine	Bifenthrin	Chlordane	Chlorphyrifos	DDD	DDE	DDT	DDD + DDE + DDT	Endrin	Endosulfan	Heptachlor	Hexochlorobenzene (HCB)	Methoxychlor	Mirex	Toxaphene	Total Organochlorine Pesticides	2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Carbamates	Bifenthrin
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	10	400	730	70	250	-	-	-	400	20	340	10	10	400	20	30	-	800	1300	800	800	800	5700	-	730
NEPM 2013 HILs D					-	-	45	2500	4500	530	2000	-	-	-	3600	100	2000	50	80	2500	100	160	-	5000	9000	5000	5000	5000	35000	-	4500
Industrial Equivalent International Environmental Quality Standard					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	620 [2&9]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																										
Insitu Soils																														
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-

[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
13 Total sum of hexachlorobenzene(HCB), alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, endrin, endrin aldehyde, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)

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Site: Woolamai to Nyora Rail Trail - Woolamai Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment
Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	Phenols													PCBs	Other		Dioxins		Furans			Miscellaneous				
	Trichlorophenols	Dichlorophenols	Monochlorophenols	Tetrachlorophenols	Cresols	Pentachlorophenol	Total Phenols	2 Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Total Halogenated Phenols	Total Non-Halogenated Phenols	Total PCBs	Carbon Disulphide	Formaldehyde	Dioxins	TCDD,2,3,7,8	Dibenzofuran	Furan	Tetrahydrofuran	2,4-Dinitrotoluene	Ethylene diamine tetra acetic acid (EDTA)	Nitrobenzene	Tributyltin Oxide
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	4000	120	40000	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	25000	660	240000	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	5 [3]	5 [3]	5 [3]	5 [3]	-	-	-	-	-	-	-	-	-	-	3700 [2]	120000 [2]	0.00018 [7]	0.000018 [2]	1000 [4]	1000 [4]	95000 [4]	-	-	-	-
Sample No.	**Date Sampled**	**Sample Depth (mbgl)**	**Soil Matrix**	**Investigation Type**																					
Insitu Soils																									
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
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13 Total is sum of reported positive concentrations for Halogenated Phenols - Total sum of 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,6-dichlorophenol, pentachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 2,3,5,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol
14 Total is sum of reported positive concentrations for Non-Halogenated Phenols - Total sum of phenol, 2-methylphenol (o-cresol), 3-methylphenol (m-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, 2.4-dinitrophenol, 2-methyl-4,6-dinitrophenol, 2-nitrophenol, 4-nitrophenol, 2-cyclohexyl-4,6-dinitrophenol and dinoseb
15 Victorian EPA - Soils containing Polychlorinated Biphenyls (PCBs) must be managed in accordance with the *Notifiable Chemical Order for Polychlorinated Biphenyls* . Industrial Waste Guidelines section *Polychlorinated Biphenyls (PCBs)* provides further information - See IWRG643.2

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Client: Michael Smith and Associates **Job No:** 123072 E1
Project Preliminary Soil Contamination Assessment **ALS Report No:** 242283

Analtye	Chlorobenzenes								Chlorinated Hydrocarbons																										Chlorinated Hydrocarbons Interim Soil Vapour (mg/m^3)				
	Monochlorobenzene	Dichlorobenzenes (Sum)	Trichlorobenzenes (Sum)	Tetrachlorobenzene	Pentachlorobenzenes (Sum)	Chlorobenzene	Hexachlorobutadiene	Hexachlorobenzene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,2,3,4-Tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-Trichlorobenzene	1,2,4,5-Tetrachlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloropropane	1,2-Dichloropropene (cis & trans)	1,3,5-Trichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,3,4,6-Tetrachlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	Dichloromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	1,2-dichloroethene	Dichloromethane (methylene chloride)	Dichloropropanes (Sum)	Trichloromethane (Chloroform)	1,1,1-trichloroethane	1,1,2-trichloroethane	Tetrachloromethane (Carbon Tetrachloride)	cis-1,2-dichloroethene (DCE)	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Vinyl Chloride	Total Chlorinated Hydrocarbons	Trichloroethene (TCE)	1,1,1-Trichloroethane (TCA)	Tetrachloroethene (PCE)	cis-1,2-dichloroethene (DCE)	Vinyl Chloride
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C																																				0.4	1200	40	2	0.5
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	230	8	0.3	0.1
Industrial Equivalent International Environmental Quality Standard	10 [4]	19 [7]	11 [7]	2.2 [7]	10 [4]	-	-	10 [4]	-	50 [4]	10 [4]	10 [4]	10 [4]	10 [4]	10 [4]	10 [4]	50 [4]	50 [4]	10 [4]	10 [4]	10 [4]	5 [4]	5 [4]	5 [4]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	-	2 [7]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	0.01 [4]	0.6 [4]	0.1 [7,8,9]	-	-	-	-	-	-
Sample No.	*Date Sampled*	*Sample Depth (mbgl)*	*Soil Matrix*	*Investigation Type*																																				
Insitu Soils																																												
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Region 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation. also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
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[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
13 Total sum of carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1- trichloroethane, 1,1,2-trichloroethane, trichloroethene, tetrachloroethene, vinyl chloride and hexachlorobutadiene

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Site:	Woolamai to Nyora Rail Trail - Woolamai Train Station	**Date:**	24-Jul-24
Client:	Michael Smith and Associates	**Job No:**	122898 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	196803, 197923, 198777 & 199595

Analtye					*Phthalates*											*Solvents*							
					Butyl Benzyl Phthalate	Dibutyl Phthalate	Diethyl Phthalate	Di-iso-decyl Phthalate	Di-iso-octyl Phthalate	Dimethyl Phthalate	Di-n-octyl Phthalate	Di(2-ethylhexyl) Phthalate	Dihexyl Phthalate	Di-isobutyl Phthalate	Dimethylterephthalate	Acetone	Acrilonitrile	Ethylhexyl Acrylate	Isopropanol (Isopropyl Alcohol)	Methyl Ethyl Ketone (MEK)	Methyl Isobutyl Ketone	Butyl Acrylate	Butyl Methacrylate
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					48 [7]	62000 [2]	490000 [2]	-	-	82 [7]	6200 [2]	120 [2]	220 2	17 [7]	100000 [2]	630000 [2]	1.2 [2]	-	4.2E+10 [2]	-	53000 [2]	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																			

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Site:	Woolamai to Nyora Rail Trail - Woolamai Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Asbestos*			*Nutrients*				*Major Anions & Cations*												*pH*
					Bonded Asbestos Containing Material (% w/w)	FA & AF Friable Asbestos (% w/w)	Asbestos in all forms	Nitrate (as NO3)	Nitrite (as NO2)	Ammonia (as N)	Total Nitrogen	Bromide	Cation Exchange Capacity (CEC meq/100g)	Chloride	Cyanide (Amenable)	Cyanide (Free)	Fluoride	oxidisable organic carbon content	Sulphate (as SO4)	Sodium	Potassium	Phosphurus (as P)	Orthophosphorus (as P)	pH
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	**0.9 [10] / 8 [11]**	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					0.02	0.001	No visible asbestos for surface soils	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					0.05			-	-	-	-	-	-	-	-	1500	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					-	-	-	1600000 [2]	100000 [2]	-	-	-	-	-	-	-	41000 [2]	-	-	-	-	-	-	-
AS2159-2009 Piling - Design & Installation [4]					-	-	-	-	-	-	-	-	-	5000 [4]	-	-	-	-	5000 [4]	-	-	-	-	> 5.5 [6]
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																				
Insitu Soils																								
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	110	-	-	-	-	-	-	7.1
BH2-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	150	-	-	-	-	-	-	6
BH4-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	10	1100	-	-	-	0.2	160	-	-	-	-	**5.4**
BH5-1.0	10/12/24	1.0	Clay	SPT Sampler	-	-	NV	-	-	-	-	-	11	730	-	-	-	<0.1	<250 LINT	-	-	-	-	**5.4**
BH6-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	140	-	-	-	-	-	-	6.1
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	190	-	-	-	-	-	-	5.8

All concentrations reported in mg/kg

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[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
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\- Indicates not tested

Ch	Chrysotile Asbestos	*ND*	Not Detected
Am	Amosite Asbestos	*NV*	None Visible
Cr	Crocidolite Asbestos	*PACM*	Potential Asbestos Containing Material Visible

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Site:	Woolamai to Nyora Rail Trail - Glen Forbes Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium III	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	100	-	-	-	-	420	-	-	220	-	1135	-	-	-	205	-	-	-	530
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					20	-	-	4	-	10 [10] / 22 [11]	-	0.4	50 [10] / 300 [11]	-	-	-	-	6.6	10 [10] / 40 [11]	-	-	20	50 [10] / 300 [11]	-
NEPM 2013 HILs C					-	300	-	90	20000	90	-	300	300	17000	-	600	19000	80	-	1200	700	-	-	30000
NEPM 2013 HILs D					-	3000	-	500	300000	900	-	3600	4000	240000	-	1500	60000	730	-	6000	10000	-	-	400000
Industrial Equivalent International Environmental Quality Standard					40 [3]	-	-	8 [3]	-	-	18000000 [2]	-	-	-	820000 [2]	-	-	-	40 [3]	-	-	40 [3]	300 [3]	-
Sample No.	*Date Sampled*	*Sample Depth (mbgl)*	*Soil Matrix*	*Investigation Type*																				
Insitu Soils																								
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	210	40	<5	<10	<0.2	34	<1	10	32	22000	16	330	0.06	<5	60	<3	<5	46	32
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	22	35	<5	<10	<0.2	9	<1	8	12	17000	14	270	<0.05	<5	6	<3	<5	<5	31
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	<5	59	53	<5	<10	<0.2	11	-	9	19	29000	21	290	<0.05	<5	11	<3	<5	<5	40
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	13	73	<5	<10	<0.2	9	-	11	39	16000	180	1200	0.1	<5	11	<3	<5	<5	71
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	9	38	<5	<10	<0.2	5	-	8	<5	11000	11	900	<0.05	<5	<5	<3	<5	<5	9
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	<5	48	<5	<10	<0.2	<5	-	7	5	10000	15	690	<0.05	<5	<5	<3	<5	<5	22

All concentrations reported in mg/kg

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[2] *US EPA (May 2016) Regional Screening - Pegion 9*
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[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
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Site: Woolamai to Nyora Rail Trail - Glen Forbes Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	*Monocyclic Aromatic Hydrocarbons (MAHs)*								*Total Recoverable Hydrocarbons (TRHs)*					*Total Petroleum Hydrocarbons (TPHs)*						*Polyaromatic Hydrocarbons (PAHs)*																		
	Benzene	Toluene	Ethylbenzene	Xylene	Isopropylbenzene (Cumene)	Styrene	1,2,4- trimethylbenzene	Total Monocyclic Hydrocarbons	F1 C6-C10 less BTEX	F2 C10-C16 less Naphthalene	F3 C16-C34	F4 C34-C40	Total Recoverable Hydrocarbons	TPHs C6-C9	TPHs C10-C14	TPHs C15-C28	TPHs C29-C36	TPHs C10-C36	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total Polyaromatic Hydrocarbons	Total Carcinogenic PAHS (as B(a)P TEQ)
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	50	85	70	105	-	-	-	-	180	120	300	2800	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	170	-	-	18 [2]	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	0.5, 0.6, 0.7	160, 390, 480	55, NL, NL	40, 95, 110	-	-	-	-	45, 40, 50	110, 230, 280	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3, 4, 5	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	0.5, 0.7, 1	220, NL, NL	NL	60, 210, 310	-	-	-	-	70, 65, 90	240, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	0.5, 1, 2	310, NL, NL	NL	95, NL, NL	-	-	-	-	110, 100, 150	440, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - +4m Sand, Silt, Clay	0.5, 2, 3	540, NL, NL	NL	170, NL, NL	-	-	-	-	200, 190, 290	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	3, 4, 6	NL	NL	230, NL, NL	-	-	-	-	260, 250, 310	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	3, 5, 6	NL	NL	NL	-	-	-	-	370, 360, 480	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	3, 6, 9	NL	NL	NL	-	-	-	-	630, 590, NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - +4m Sand, Silt, Clay	3, 10, 20	NL	NL	NL	-	-	-	-	NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 0m to <2m Sand, Silt, Clay	77, 180, 350	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 2m to <4m Sand, Silt, Clay	160, NL, NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 4m+ Sand, Silt, Clay	NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 HSL for Direct ontact by Intrusive Maintenance Worker	1100	120000	85000	130000	-	-	-	-	82000	62000	85000	120000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29000	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	300	3
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	4000	40
Industrial Equivalent International Environmental Quality Standard	-	-	-	-	9900 [7]	50 [8]	210 [9]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits for TRH Fractions F1-F4 (Coarse / Fine) - Commercial / Industrial	-	-	-	-	-	-	-	-	700 / 800	1000 / 1000	3500 / 5000	10000 / 10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																																	
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	40	210	<50	250	<20	<20	120	110	230	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	0.3	<0.1
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	78	<50	78	<20	<20	<50	65	65	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Realonal Screenna - Peaon 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1.1-dichloroethene be detected in soil. Groundwater should be surveved. as recommended by Dutch Ministry of Housing. Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009. due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
[13] *CRC Care Technical Report 10 - Health screening levels for petroleum hydrocarbons in soil and groundwater*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
14 Total is sum of reported positive concentrations for MAHs - Total sum of benzene, toluene, ethyl benzene, xylenes (includes ortho, para and meta xylenes) and styrene
15 Total is sum of reported positive concentrations for PAHs - Total sum of naphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene and pyrene

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Site:	Woolamai to Nyora Rail Trail - Glen Forbes Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Organochlorine & Organophosphate Pesticides (OCPs & OPPs)*																	*Herbicides*						*Insecticide*	
					Aldrin	Dieldrin	Aldrin + Dieldrin	Atrazine	Bifenthrin	Chlordane	Chlorphyrifos	DDD	DDE	DDT	DDD + DDE + DDT	Endrin	Endosulfan	Heptachlor	Hexochlorobenzene (HCB)	Methoxychlor	Mirex	Toxaphene	Total Organochlorine Pesticides	2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Carbamates	Bifenthrin
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	10	400	730	70	250	-	-	-	400	20	340	10	10	400	20	30	-	800	1300	800	800	800	5700	-	730
NEPM 2013 HILs D					-	-	45	2500	4500	530	2000	-	-	-	3600	100	2000	50	80	2500	100	160	-	5000	9000	5000	5000	5000	35000	-	4500
Industrial Equivalent International Environmental Quality Standard					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	620 [2&9]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																										
Insitu Soils																														
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-

[6] *AS3000-2009 Concrete Structures*

[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*

[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*

[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*

[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*

[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*

[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*

- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested
13 Total sum of hexachlorobenzene(HCB), alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, endrin, endrin aldehyde, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)

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Site:	Woolamai to Nyora Rail Trail - Glen Forbes Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye	Phenols													PCBs	Other		Dioxins		Furans			Miscellaneous				
	Trichlorophenols	Dichlorophenols	Monochlorophenols	Tetrachlorophenols	Cresols	Pentachlorophenol	Total Phenols	2 Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Total Halogenated Phenols	Total Non-Halogenated Phenols	Total PCBs	Carbon Disulphide	Formaldehyde	Dioxins	TCDD 2,3,7,8	Dibenzofuran	Furan	Tetrahydrofuran	2,4-Dinitrotoluene	Ethylene diamine tetra acetic acid (EDTA)	Nitrobenzene	Tributyltin Oxide
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	4000	120	40000	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	25000	660	240000	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	5 [3]	5 [3]	5 [3]	5 [3]	-	-	-	-	-	-	-	-	-	-	3700 [2]	120000 [2]	0.00018 [7]	0.000018 [2]	1000 [4]	1000 [4]	95000 [4]	-	-	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																					
Insitu Soils																									
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-	-
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-	-
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Region 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested
13 Total is sum of reported positive concentrations for Halogenated Phenols - Total sum of 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,6-dichlorophenol, pentachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 2,3,5,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol
14 Total is sum of reported positive concentrations for Non-Halogenated Phenols - Total sum of phenol, 2-methylphenol (o-cresol), 3-methylphenol (m-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, 2.4-dinitrophenol, 2-methyl-4,6-dinitrophenol, 2-nitrophenol, 4-nitrophenol, 2-cyclohexyl-4,6-dinitrophenol and dinoseb
15 Victorian EPA - Soils containing Polychlorinated Biphenyls (PCBs) must be managed in accordance with the *Notifiable Chemical Order for Polychlorinated Biphenyls* . Industrial Waste Guidelines section *Polychlorinated Biphenyls (PCBs)* provides further information - See IWRG643.2

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Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye	Chlorobenzenes								Chlorinated Hydrocarbons																										Chlorinated Hydrocarbons Interim Soil Vapour (mg/m^3)				
	Monochlorobenzene	Dichlorobenzenes (Sum)	Trichlorobenzenes (Sum)	Tetrachlorobenzene	Pentachlorobenzenes (Sum)	Chlorobenzene	Hexachlorobutadiene	Hexachlorobenzene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,2,3,4-Tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-Trichlorobenzene	1,2,4,5-Tetrachlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloropropane	1,3-Dichloropropane (cis & trans)	1,3,5-Trichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,3,4,6-Tetrachlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	Dichloromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	1,2-dichloroethene	Dichloromethane (methylene chloride)	Dichloropropanes (Sum)	Trichloromethane (Chloroform)	1,1,1-trichloroethane	1,1,2-trichloroethane	Tetrachloromethane (Carbon Tetrachloride)	cis-1,2-dichloroethene (DCE)	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Vinyl Chloride	Total Chlorinated Hydrocarbons	Trichloroethene (TCE)	1,1,1-Trichloroethane (TCA)	Tetrachloroethene (PCE)	cis-1,2-dichloroethene (DCE)	Vinyl Chloride
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C																																				0.4	1200	40	2	0.5
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	230	8	0.3	0.1
Industrial Equivalent International Environmental Quality Standard	10 [8]	19 [7]	11 [7]	2.2 [7]	10 [8]	-	-	10 [8]	-	50 [8]	10 [8]	10 [8]	10 [8]	10 [8]	10 [8]	10 [8]	50 [8]	50 [8]	10 [8]	10 [8]	10 [8]	5 [8]	5 [8]	5 [8]	50 [8]	50 [8]	50 [8]	50 [8]	50 [8]	50 [8]	-	2 [7]	50 [8]	50 [8]	50 [8]	50 [8]	50 [8]	0.01 [8]	0.6 [8]	0.1 [7,8,9]	-	-	-	-	-	-
Sample No.	**Date Sampled**	**Sample Depth (mbgl)**	**Soil Matrix**	**Investigation Type**																																				
Insitu Soils																																								
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

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[2] *US EPA (May 2016) Regional Screening - Region 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation. also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
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[10] *Canadian Ecolaoical Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
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13 Total sum of carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1- trichloroethane, 1,1,2-trichloroethane, trichloroethene, tetrachloroethene, vinyl chloride and hexachlorobutadiene

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Site: Woolamai to Nyora Rail Trail - Glen Forbes Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 24-Jul-24
Job No: 122898 E1
ALS Report No: 196803, 197923, 198777 & 199595

Analtye	*Phthalates*											*Solvents*							
	Butyl Benzyl Phthalate	Dibutyl Phthalate	Diethyl Phthalate	Di-iso-decyl Phthalate	Di-iso-octyl Phthalate	Dimethyl Phthalate	Di-n-octyl Phthalate	Di(2-ethylhexyl) Phthalate	Dihexyl Phthalate	Di-isobutyl Phthalate	Dimethylterephthalate	Acetone	Acrilonitrile	Ethylhexyl Acrylate	Isopropanol (Isopropyl Alcohol)	Methyl Ethyl Ketone (MEK)	Methyl Isobutyl Ketone	Butyl Acrylate	Butyl Methacrylate
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	48 [7]	62000 [2]	490000 [2]	-	-	82 [7]	6200 [2]	120 [2]	220 2	17 [7]	100000 [2]	630000 [2]	1.2 [2]	-	4.2E+10 [2]	-	53000 [2]	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***															
																			Insitu Soils
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

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[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
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[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
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[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
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Geotechnical Engineers
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Site:	Woolamai to Nyora Rail Trail - Glen Forbes Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Asbestos*			*Nutrients*				*Major Anions & Cations*												*pH*
					Bonded Asbestos Containing Material (% w/w)	FA & AF Friable Asbestos (% w/w)	Asbestos in all forms	Nitrate (as NO3)	Nitrite (as NO2)	Ammonia (as N)	Total Nitrogen	Bromide	Cation Exchange Capacity (CEC meq/100g)	Chloride	Cyanide (Amenable)	Cyanide (Free)	Fluoride	oxidisable organic carbon content	Sulphate (as SO4)	Sodium	Potassium	Phosphurus (as P)	Orthophosphorus (as P)	pH
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	**0.9 [10] / 8 [11]**	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					0.02	0.001	No visible asbestos for surface soils	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					0.05			-	-	-	-	-	-	-	-	1500	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					-	-	-	1600000 [2]	100000 [2]	-	-	-	-	-	-	-	41000 [2]	-	-	-	-	-	-	-
AS2159-2009 Piling - Design & Installation [4]					-	-	-	-	-	-	-	-	-	5000 [4]	-	-	-	-	5000 [4]	-	-	-	-	> 5.5 [5]
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																				
Insitu Soils																								
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	170	-	-	-	-	-	-	6.6
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	180	-	-	-	-	-	-	5.9
BH9-1.0	10/12/24	1.0	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7
BH10-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	12	16	-	-	-	3.3	<25 LINT	-	-	-	-	6
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7

All concentrations reported in mg/kg

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[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
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Ch	Chrysotile Asbestos	*ND*	Not Detected
Am	Amosite Asbestos	*NV*	None Visible
Cr	Crocidolite Asbestos	*PACM*	Potential Asbestos Containing Material Visible

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Site:	Woolamai to Nyora Rail Trail - Kernot Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium III	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	100	-	-	-	-	420	-	-	110	-	1135	-	-	-	185	-	-	-	290
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					20	-	-	4	-	10 [10] / 22 [11]	-	0.4	50 [10] / 300 [11]	-	-	-	-	6.6	10 [10] / 40 [11]	-	-	20	50 [10] / 300 [11]	-
NEPM 2013 HILs C					-	300	-	90	20000	90	-	300	300	17000	-	600	19000	80	-	1200	700	-	-	30000
NEPM 2013 HILs D					-	3000	-	500	300000	900	-	3600	4000	240000	-	1500	60000	730	-	6000	10000	-	-	400000
Industrial Equivalent International Environmental Quality Standard					40 [3]	-	-	8 [3]	-	-	18000000 [2]	-	-	-	820000 [2]	-	-	-	40 [3]	-	-	40 [3]	300 [3]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																				
Insitu Soils																								
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	<5	<5	11	<5	<10	<0.2	<5	-	<5	<5	1800	5	11	<0.05	<5	<5	<3	<5	<5	8
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	<5	58	17	<5	<10	<0.2	6	-	<5	<5	6600	13	27	<0.05	<5	<5	<3	<5	<5	14
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	<5	<5	14	<5	<10	<0.2	<5	-	<5	<5	3900	10	76	<0.05	<5	<5	<3	<5	<5	13
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	230	74	<5	<10	<0.2	6	<1	<5	32	11000	230	260	0.11	<5	7	<3	<5	6	80
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	<5	84	45	<5	19	<0.2	12	<1	<5	17	11000	18	190	0.08	<5	12	<3	<5	7	16

All concentrations reported in mg/kg

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Site: Woolamai to Nyora Rail Trail - Kernot Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	Monocyclic Aromatic Hydrocarbons (MAHs)								Total Recoverable Hydrocarbons (TRHs)					Total Petroleum Hydrocarbons (TPHs)					Polyaromatic Hydrocarbons (PAHs)																			
	Benzene	Toluene	Ethylbenzene	Xylene	Isopropylbenzene (Cumene)	Styrene	1,2,4- trimethylbenzene	Total Monocyclic Hydrocarbons	F1 C6-C10 less BTEX	F2 C10-C16 less Naphthalene	F3 C16-C34	F4 C34-C40	Total Recoverable Hydrocarbons	TPHs C6-C9	TPHs C10-C14	TPHs C15-C28	TPHs C29-C36	TPHs C10-C36	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total Polyaromatic Hydrocarbons	Total Carcinogenic PAHS (as B(a)P TEQ)
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	50	85	70	105	-	-	-	-	180	120	300	2800	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	170	-	-	18 [2]	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	0.5, 0.6, 0.7	160, 390, 480	55, NL, NL	40, 95, 110	-	-	-	-	45, 40, 50	110, 230, 280	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3, 4, 5	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	0.5, 0.7, 1	220, NL, NL	NL	60, 210, 310	-	-	-	-	70, 65, 90	240, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	0.5, 1, 2	310, NL, NL	NL	95, NL, NL	-	-	-	-	110, 100, 150	440, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - +4m Sand, Silt, Clay	0.5, 2, 3	540, NL, NL	NL	170, NL, NL	-	-	-	-	200, 190, 290	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	3, 4, 6	NL	NL	230, NL, NL	-	-	-	-	280, 250, 310	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	3, 4, 6	NL	NL	NL	-	-	-	-	370, 360, 480	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	3, 6, 9	NL	NL	NL	-	-	-	-	630, 590, NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - +4m Sand, Silt, Clay	3, 10, 20	NL	NL	NL	-	-	-	-	NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 0m to <2m Sand, Silt, Clay	77, 180, 350	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 2m to <4m Sand, Silt, Clay	160, NL, NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 4m+ Sand, Silt, Clay	NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 HSL for Direct ontact by Intrusive Maintenance Worker	1100	120000	85000	130000	-	-	-	-	82000	62000	85000	120000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29000	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	300	3
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	4000	40
Industrial Equivalent International Environmental Quality Standard	-	-	-	-	9900 [2]	50 [3]	210 [2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits for TRH Fractions F1-F4 (Coarse / Fine) - Commercial / Industrial	-	-	-	-	-	-	-	-	700 / 800	1000 / 1000	3500 / 5000	10000 / 10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																																	
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	53	<50	53	<20	<20	<50	60	60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	170	<50	170	<20	<20	75	110	180	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	140	<50	140	<20	<20	74	69	140	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.2	0.2	0.9	<0.1

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecoloaical Investiaation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecoloaical Level for protection of 60% of soil speecies (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
[13] *CRC Care Technical Report 10 - Health screening levels for petroleum hydrocarbons in soil and groundwater*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
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14 Total is sum of reported positive concentrations for MAHs - Total sum of benzene, toluene, ethyl benzene, xylenes (includes ortho, para and meta xylenes) and styrene
15 Total is sum of reported positive concentrations for PAHs - Total sum of naphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene and pyrene

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Site:	Woolamai to Nyora Rail Trail - Kernot Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Organochlorine & Organophosphate Pesticides (OCPs & OPPs)*																	*Herbicides*						*Insecticide*	
					Aldrin	Dieldrin	Aldrin + Dieldrin	Atrazine	Bifenthrin	Chlordane	Chlorpyrifos	DDD	DDE	DDT	DDD + DDE + DDT	Endrin	Endosulfan	Heptachlor	Hexochlorobenzene (HCB)	Methoxychlor	Mirex	Toxaphene	Total Organochlorine Pesticides	2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Carbamates	Bifenthrin
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	10	400	730	70	250	-	-	-	400	20	340	10	10	400	20	30	-	800	1300	800	800	800	5700	-	730
NEPM 2013 HILs D					-	-	45	2500	4500	530	2000	-	-	-	3600	100	2000	50	80	2500	100	160	-	5000	9000	5000	5000	5000	35000	-	4500
Industrial Equivalent International Environmental Quality Standard					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	620 [2&9]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																										
Insitu Soils																														
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-

[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
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[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

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\- Indicates not tested
13 Total sum of hexachlorobenzene(HCB), alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, endrin, endrin aldehyde, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)

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Client: Michael Smith and Associates
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Analtye					Phenols												PCBs	Other		Dioxins		Furans			Miscellaneous				
					Trichlorophenols	Dichlorophenols	Monochlorophenols	Tetrachlorophenols	Cresols	Pentachlorophenol	Total Phenols	2 Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Total Halogenated Phenols	Total Non-Halogenated Phenols	Total PCBs	Carbon Disulphide	Formaldehyde	Dioxins	TCDD,2,3,7,8	Dibenzofuran	Furan	Tetrahydrofuran	2,4-Dinitrotoluene	Ethylene diamine tetra acetic acid (EDTA)	Nitrobenzene	Tributyltin Oxide
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	-	-	4000	120	40000	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					-	-	-	-	25000	660	240000	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					5 [3]	5 [3]	5 [3]	5 [3]	-	-	-	-	-	-	-	-	-	-	3700 [2]	120000 [2]	0.00018 [7]	0.000018 [2]	1000 [4]	1000 [4]	95000 [4]	-	-	-	-
Sample No.	*Date Sampled*	*Sample Depth (mbgl)*	*Soil Matrix*	*Investigation Type*																									
Insitu Soils																													
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
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13 Total is sum of reported positive concentrations for Halogenated Phenols - Total sum of 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,6-dichlorophenol, pentachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 2,3,5,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol
14 Total is sum of reported positive concentrations for Non-Halogenated Phenols - Total sum of phenol, 2-methylphenol (o-cresol), 3-methylphenol (m-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, 2.4-dinitrophenol, 2-methyl-4,6-dinitrophenol, 2-nitrophenol, 4-nitrophenol, 2-cyclohexyl-4,6-dinitrophenol and dinoseb
15 Victorian EPA - Soils containing Polychlorinated Biphenyls (PCBs) must be managed in accordance with the *Notifiable Chemical Order for Polychlorinated Biphenyls* . Industrial Waste Guidelines section *Polychlorinated Biphenyls (PCBs)* provides further information - See IWRG643.2

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Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
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| Analtye | | |

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Site:	Woolamai to Nyora Rail Trail - Kernot Train Station	**Date:**	24-Jul-24
Client:	Michael Smith and Associates	**Job No:**	122898 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	196803, 197923, 198777 & 199595

Analtye	*Phthalates*											*Solvents*							
	Butyl Benzyl Phthalate	Dibutyl Phthalate	Diethyl Phthalate	Di-iso-decyl Phthalate	Di-iso-octyl Phthalate	Dimethyl Phthalate	Di-n-octyl Phthalate	Di(2-ethylhexyl) Phthalate	Dihexyl Phthalate	Di-isobutyl Phthalate	Dimethylterephthalate	Acetone	Acrilonitrile	Ethylhexyl Acrylate	Isopropanol (Isopropyl Alcohol)	Methyl Ethyl Ketone (MEK)	Methyl Isobutyl Ketone	Butyl Acrylate	Butyl Methacrylate
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	48 [7]	62000 [2]	490000 [2]	-	-	82 [7]	6200 [2]	120 [2]	220 2	17 [7]	100000 [2]	630000 [2]	1.2 [2]	-	4.2E+10 [2]	-	53000 [2]	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***															
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
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[6] *AS3000-2009 Concrete Structures*
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Geotechnical Engineers
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Site:	Woolamai to Nyora Rail Trail - Kernot Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Asbestos*			*Nutrients*				*Major Anions & Cations*												*pH*
					Bonded Asbestos Containing Material (% w/w)	FA & AF Friable Asbestos (% w/w)	Asbestos in all forms	Nitrate (as NO3)	Nitrite (as NO2)	Ammonia (as N)	Total Nitrogen	Bromide	Cation Exchange Capacity (CEC meq/100g)	Chloride	Cyanide (Amenable)	Cyanide (Free)	Fluoride	oxidisable organic carbon content	Sulphate (as SO4)	Sodium	Potassium	Phosphurus (as P)	Orthophosphorus (as P)	pH
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	**0.9 [10] / 8 [11]**	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					0.02	0.001	No visible asbestos for surface soils	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					0.05			-	-	-	-	-	-	-	-	1500	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					-	-	-	1600000 [2]	100000 [2]	-	-	-	-	-	-	-	41000 [2]	-	-	-	-	-	-	-
AS2159-2009 Piling - Design & Installation [4]					-	-	-	-	-	-	-	-	-	5000 [4]	-	-	-	-	5000 [4]	-	-	-	-	> 5.5 [6]
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																				
Insitu Soils																								
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	NV	-	-	-	-	-	8.1	30	-	-	-	1.8	<100 LINT	-	-	-	-	4.9
BH14-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	150	-	-	-	-	-	-	5.8
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	13	9	-	<5	160	4.4	<50 LINT	-	-	-	-	6

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested

Ch	Chrysotile Asbestos	*ND*	Not Detected
Am	Amosite Asbestos	*NV*	None Visible
Cr	Crocidolite Asbestos	*PACM*	Potential Asbestos Containing Material Visible

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Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium III	Chromium VI	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	100	-	-	-	-	420	-	-	170	-	1135	-	-	-	175	-	-	-	410
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	20	-	-	4	-	10 [10] / 22 [11]	-	0.4	50 [10] / 300 [11]	-	-	-	-	6.6	10 [10] / 40 [11]	-	-	20	50 [10] / 300 [11]	-
NEPM 2013 HILs C	-	300	-	90	20000	90	-	300	300	17000	-	600	19000	80	-	1200	700	-	-	30000
NEPM 2013 HILs D	-	3000	-	500	300000	900	-	3600	4000	240000	-	1500	60000	730	-	6000	10000	-	-	400000
Industrial Equivalent International Environmental Quality Standard	40 [3]	-	-	8 [3]	-	-	18000000 [2]	-	-	-	820000 [2]	-	-	-	40 [3]	-	-	40 [3]	300 [3]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																
Insitu Soils																				
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	<5	8	31	<5	<10	<0.2	11	<1	<5	11	9900	40	170	0.06	<5	13	<3	<5	<5	28
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	<5	11	33	<5	<10	<0.2	23	<1	7	30	20000	34	230	0.07	<5	32	<3	<5	<5	58
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	<5	<5	16	<5	<10	<0.2	<5	-	<5	<5	14000	15	79	<0.05	<5	<5	<3	<5	<5	8
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	<5	11	57	<5	<10	<0.2	6	-	<5	13	7000	39	78	<0.05	<5	<5	<3	<5	<5	43
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	<5	<5	8	<5	<10	<0.2	<5	-	<5	<5	5400	5	14	<0.05	<5	<5	<3	<5	<5	<5
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	<5	<5	20	<5	<10	<0.2	<5	<1	<5	<5	4200	11	61	<0.05	<5	<5	<3	<5	<5	10
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<5	<5	23	<5	<10	<0.2	<5	<1	<5	<5	3600	11	99	<0.05	<5	<5	<3	<5	<5	13

All concentrations reported in mg/kg

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[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
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Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
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Analtye	*Monocyclic Aromatic Hydrocarbons (MAHs)*								*Total Recoverable Hydrocarbons (TRHs)*					*Total Petroleum Hydrocarbons (TPHs)*						*Polyaromatic Hydrocarbons (PAHs)*																	
	Benzene	Toluene	Ethylbenzene	Xylene	Isopropylbenzene (Cumene)	Styrene	1,2,4- trimethylbenzene	Total Monocyclic Hydrocarbons	F1 C6-C10 less BTEX	F2 C10-C16 less Naphthalene	F3 C16-C34	F4 C34-C40	Total Recoverable Hydrocarbons	TPHs C6-C9	TPHs C10-C14	TPHs C15-C28	TPHs C29-C36	TPHs C10-C36	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	Total Polyaromatic Hydrocarbons	Total Carcinogenic PAHS (as B[a]P TEQ)
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	50	85	70	105	-	-	-	-	180	120	300	2800	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	170	-	-	18 [2]	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	0.5, 0.6, 0.7	160, 390, 480	55, NL, NL	40, 95, 110	-	-	-	-	45, 40, 50	110, 230, 280	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3, 4, 5	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	0.5, 0.7, 1	220, NL, NL	NL	60, 230, 310	-	-	-	-	70, 65, 90	240, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	0.5, 1, 2	310, NL, NL	NL	95, NL, NL	-	-	-	-	110, 100, 150	440, NL, NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-A & B for Vapour Intrusion - +4m Sand, Silt, Clay	0.5, 2, 3	540, NL, NL	NL	170, NL, NL	-	-	-	-	200, 190, 290	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 0m to <1m Sand, Silt, Clay	3, 4, 6	NL	NL	230, NL, NL	-	-	-	-	260, 250, 310	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 1m to <2m Sand, Silt, Clay	3, 4, 6	NL	NL	NL	-	-	-	-	370, 360, 480	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - 2m to <4m Sand, Silt, Clay	3, 6, 9	NL	NL	NL	-	-	-	-	630, 590, NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
NEPM HSL-D for Vapour Intrusion - +4m Sand, Silt, Clay	3, 10, 20	NL	NL	NL	-	-	-	-	NL	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 0m to <2m Sand, Silt, Clay	77, 180, 350	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 2m to <4m Sand, Silt, Clay	160, NL, NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 Soil HSL for Vapour Intrusion to Intrusive Maintenance Worker (Shallow Trench) - 4m+ Sand, Silt, Clay	NL	NL	NL	NL	-	-	-	-	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	-	-
[13] CRC Care 2011 HSL for Direct ontact by Intrusive Maintenance Worker	1100	120000	85000	130000	-	-	-	-	82000	62000	85000	120000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29000	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	300	3
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NL	-	-	4000	40
Industrial Equivalent International Environmental Quality Standard	-	-	-	-	9900 [7]	50 [8]	210 [9]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits for TRH Fractions F1-F4 (Coarse / Fine) - Commercial / Industrial	-	-	-	-	-	-	-	-	700 / 800	1000 / 1000	3500 / 5000	10000 / 10000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample No.	*Date Sampled*	*Sample Depth (mbgl)*	*Soil Matrix*	*Investigation Type*																																	
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	60	<50	60	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.2	0.4	<0.1
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	170	<50	170	<20	<20	<50	140	140	<0.1	<0.1	<0.1	0.1	0.2	0.1	0.1	0.1	0.2	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.3	1.4	0.2
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	130	<50	130	<20	<20	<50	96	96	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	60	<50	60	<20	<20	<50	63	63	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Pilina - Design & Installation. also deendent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
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[10] *Canadian Ecolaoical Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
[13] *CRC Care Technical Report 10 - Health screening levels for petroleum hydrocarbons in soil and groundwater*
- Denotes that analyte was not tested or screening criteria is not available

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Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
14 Total is sum of reported positive concentrations for MAHs - Total sum of benzene, toluene, ethyl benzene, xylenes (includes ortho, para and meta xylenes) and styrene
15 Total is sum of reported positive concentrations for PAHs - Total sum of naphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene and pyrene

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Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Organochlorine & Organophosphate Pesticides (OCPs & OPPs)*																	*Herbicides*						*Insecticide*	
					Aldrin	Dieldrin	Aldrin + Dieldrin	Atrazine	Bifenthrin	Chlordane	Chlorphyrifos	DDD	DDE	DDT	DDD + DDE + DDT	Endrin	Endosulfan	Heptachlor	Hexochlorobenzene (HCB)	Methoxychlor	Mirex	Toxaphene	Total Organochlorine Pesticides	2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Carbamates	Bifenthrin
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	10	400	730	70	250	-	-	-	400	20	340	10	10	400	20	30	-	800	1300	800	800	800	5700	-	730
NEPM 2013 HILs D					-	-	45	2500	4500	530	2000	-	-	-	3600	100	2000	50	80	2500	100	160	-	5000	9000	5000	5000	5000	35000	-	4500
Industrial Equivalent International Environmental Quality Standard					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	620 [2&9]	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																										
Insitu Soils																														
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<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	-	-	<0.05	-	-	-	-	-	-	-	-

[6] *AS3000-2009 Concrete Structures*

[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*

[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*

[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*

[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*

[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*

[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*

- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested
13 Total sum of hexachlorobenzene(HCB), alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, endrin, endrin aldehyde, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)

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SINCE 1963

Site: Woolamai to Nyora Rail Trail - Woodleigh Train Station
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	Phenols													PCBs	Other		Dioxins		Furans			Miscellaneous			
	Trichlorophenols	Dichlorophenols	Monochlorophenols	Tetrachlorophenols	Cresols	Pentachlorophenol	Total Phenols	2 Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Total Halogenated Phenols	Total Non-Halogenated Phenols	Total PCBs	Carbon Disulphide	Formaldehyde	Dioxins	TCDD 2,3,7,8	Dibenzofuran	Furan	Tetrahydrofuran	2,4-Dinitrotoluene	Ethylene diamine tetra acetic acid (EDTA)	Nitrobenzene	Tributyltin Oxide
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	4000	120	40000	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	25000	660	240000	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	5 [3]	5 [3]	5 [3]	5 [3]	-	-	-	-	-	-	-	-	-	-	3700 [2]	120000 [2]	0.00018 [7]	0.000018 [2]	1000 [2]	1000 [2]	95000 [2]	-	-	-	-

Sample No.	Date Sampled	Sample Depth (mbgl)	Soil Matrix	Investigation Type																						
Insitu Soils																										
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<0.1	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecologicl Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
13 Total is sum of reported positive concentrations for Halogenated Phenols - Total sum of 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,6-dichlorophenol, pentachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 2,3,5,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol
14 Total is sum of reported positive concentrations for Non-Halogenated Phenols - Total sum of phenol, 2-methylphenol (o-cresol), 3-methylphenol (m-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, 2.4-dinitrophenol, 2-methyl-4,6-dinitrophenol, 2-nitrophenol, 4-nitrophenol, 2-cyclohexyl-4,6-dinitrophenol and dinoseb
15 Victorian EPA - Soils containing Polychlorinated Biphenyls (PCBs) must be managed in accordance with the *Notifiable Chemical Order for Polychlorinated Biphenyls* . Industrial Waste Guidelines section *Polychlorinated Biphenyls (PCBs)* provides further information - See IWRG643.2

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Site: Woolamai to Nyora Rail Trail - Woodleigh Train Station **Date:** 9-Jan-25
Client: Michael Smith and Associates **Job No:** 123072 E1
Project Preliminary Soil Contamination Assessment **ALS Report No:** 242283

Analtye	Chlorobenzenes								Chlorinated Hydrocarbons																										Chlorinated Hydrocarbons Interim Soil Vapour (mg/m^3)				
	Monochlorobenzene	Dichlorobenzenes (Sum)	Trichlorobenzenes (Sum)	Tetrachlorobenzene	Pentachlorobenzenes (Sum)	Chlorobenzene	Hexachlorobutadiene	Hexachlorobenzene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,2,3,4-Tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-Trichlorobenzene	1,2,4,5-Tetrachlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloropropane	1,2-Dichloropropene (cis & trans)	1,3,5-Trichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,3,4,6-Tetrachlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	Dichloromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	1,2-dichloroethene	Dichloromethane (methylene chloride)	Dichloropropanes (Sum)	Trichloromethane (Chloroform)	1,1,1-trichloroethane	1,1,2-trichloroethane	Tetrachloromethane (Carbon Tetrachloride)	cis-1,2-dichloroethene (DCE)	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Vinyl Chloride	Total Chlorinated Hydrocarbons	Trichloroethene (TCE)	1,1,1-Trichloroethane (TCA)	Tetrachloroethene (PCE)	cis-1,2-dichloroethene (DCE)	Vinyl Chloride
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [3]	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard	10 [4]	19 [7]	11 [7]	2.2 [7]	10 [4]	-	-	10 [4]	-	50 [4]	10 [4]	10 [4]	10 [4]	10 [4]	10 [4]	10 [4]	50 [4]	50 [4]	10 [4]	10 [4]	10 [4]	5 [4]	5 [4]	5 [4]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	-	2 [7]	50 [4]	50 [4]	50 [4]	50 [4]	50 [4]	0.01 [4]	0.6 [4]	0.1 [7,8,9]	-	-	-	-	-	-
Sample No.	*Date Sampled*	*Sample Depth (mbgl)*	*Soil Matrix*	*Investigation Type*																																				
Insitu Soils																																													
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	-	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	-	<0.1	<0.1	<0.1	-	-	-	<1	-	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists. Canadian Criteria adopted in absence of Australian criteria. USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Region 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing. Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- *Denotes that analyte was not tested or screening criteria is not available*

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- Indicates not tested
13 Total sum of carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1- trichloroethane, 1,1,2-trichloroethane, trichloroethene, tetrachloroethene, vinyl chloride and hexachlorobutadiene

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Site:	Woolamai to Nyora Rail Trail - Woodleigh Train Station	**Date:**	24-Jul-24
Client:	Michael Smith and Associates	**Job No:**	122898 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	196803, 197923, 198777 & 199595

Analtye					*Phthalates*											*Solvents*							
					Butyl Benzyl Phthalate	Dibutyl Phthalate	Diethyl Phthalate	Di-iso-decyl Phthalate	Di-iso-octyl Phthalate	Dimethyl Phthalate	Di-n-octyl Phthalate	Di(2-ethylhexyl) Phthalate	Dihexyl Phthalate	Di-isobutyl Phthalate	Dimethylterephthalate	Acetone	Acrilonitrile	Ethylhexyl Acrylate	Isopropanol (Isopropyl Alcohol)	Methyl Ethyl Ketone (MEK)	Methyl Isobutyl Ketone	Butyl Acrylate	Butyl Methacrylate
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					48 [7]	62000 [2]	490000 [2]	-	-	82 [7]	6200 [2]	120 [2]	220 2	17 [7]	100000 [2]	630000 [2]	1.2 [2]	-	4.2E+10 [2]	-	53000 [2]	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																			
					Insitu Soils																		
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
[10] *Canadian Ecological Level for protection of 75% of soil species (Residential Scenario)*
[11] *Canadian Ecological Level for protection of 60% of soil species (Industrial Scenario)*
[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
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\- Indicates not tested

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Site:	Woolamai to Nyora Rail Trail - Woodleigh Train Station	**Date:**	9-Jan-25
Client:	Michael Smith and Associates	**Job No:**	123072 E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Analtye					*Asbestos*			*Nutrients*				*Major Anions & Cations*												*pH*
					Bonded Asbestos Containing Material (% w/w)	FA & AF Friable Asbestos (% w/w)	Asbestos in all forms	Nitrate (as NO3)	Nitrite (as NO2)	Ammonia (as N)	Total Nitrogen	Bromide	Cation Exchange Capacity (CEC meq/100g)	Chloride	Cyanide (Amenable)	Cyanide (Free)	Fluoride	oxidisable organic carbon content	Sulphate (as SO4)	Sodium	Potassium	Phosphurus (as P)	Orthophosphorus (as P)	pH
Site Derived Ecological Investigation Levels / NEPM 2013 Ecological Screening Levels [12] Commercial / Industrial (Fill / Natural)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US EPA Ecological Soil Screening Levels [1]					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Soil Quality Guidelines for Environmental Health [1]					-	-	-	-	-	-	-	-	-	-	-	**0.9 [10] / 8 [11]**	-	-	-	-	-	-	-	-
NEPM 2013 HILs C					0.02	0.001	No visible asbestos for surface soils	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-
NEPM 2013 HILs D					0.05			-	-	-	-	-	-	-	-	1500	-	-	-	-	-	-	-	-
Industrial Equivalent International Environmental Quality Standard					-	-	-	1600000 [2]	100000 [2]	-	-	-	-	-	-	-	41000 [2]	-	-	-	-	-	-	-
AS2159-2009 Piling - Design & Installation [4]					-	-	-	-	-	-	-	-	-	5000 [4]	-	-	-	-	5000 [4]	-	-	-	-	> 5.5 [5]
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***																				
Insitu Soils																								
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	190	-	-	-	-	-	-	5.8
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	13	37	-	<5	190	4.5	<50 LINT	-	-	-	-	6
BH19-0.5	11/12/24	0.5	Clay	SPT Sampler	-	-	NV	-	-	-	-	-	6.3	64	-	-	-	0.9	<50 LINT	-	-	-	-	6.2
BH20-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4
BH20-1.0	11/12/24	1.0	Clay	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	160	-	-	-	-	-	-	5.4
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	-	-	NV	-	-	-	-	-	-	-	-	<5	150	-	-	-	-	-	-	6

All concentrations reported in mg/kg

[1] *Used where no NEPM EIL exists, Canadian Criteria adopted in absence of Australian criteria, USEPA criteria adopted in absence of Australian & Canadian criteria*
[2] *US EPA (May 2016) Regional Screening - Pegion 9*
[3] *Canadian Soil Quality Guidelines for the Protection of Environmental & Human Health*
[4] *AS2159-2009 Piling - Design & Installation, also dependent on pH*
[5] *NEPM 1999 Interim Urban Ecological Investigation Levels*
[6] *AS3000-2009 Concrete Structures*
[7] *Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009*
[8] *Should Vinyl Chloride or 1,1-dichloroethene be detected in soil, Groundwater should be surveyed, as recommended by Dutch Ministry of Housing, Spatial Planning & the Environment (VROM) (2009) - Soil Remediation Circular 2009, due to extremely high mobility of contaminants*
[9] *US EPA Aldicarb Screening concentrations used as no Carbamates concentrations have been derived, rationale being that Aldicarb is recognised as being the most toxic of Carbamte Insecticides*
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[12] *NEPM Ecological Investigation Levels for Site Land Use Scenarios - Fill / Natural Soils*
- Denotes that analyte was not tested or screening criteria is not available

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Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
\- Indicates not tested

Ch	Chrysotile Asbestos	*ND*	Not Detected
Am	Amosite Asbestos	*NV*	None Visible
Cr	Crocidolite Asbestos	*PACM*	Potential Asbestos Containing Material Visible

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Site: Woolamai to Nyora Rail Trail - Woolamai, Glen Forbes, Kernot and Woodleigh Former Train Stations
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9/01/2025
Job No: 123072/E1
ALS Report No: 242283

Sample No.	Soil Matrix	Sample Type	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium III	Chromium VI	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc
Insitu Soils																				
Woolamai Train Station																				
BH1-0.5	Fill	SPT Sampler	10/12/24	<5	56	10	<5	<10	<0.2	<5	<1	<5	<5	0.06	<5	<5	<3	<5	<5	<5
BH2-0.1	Fill	SPT Sampler	10/12/24	<5	<5	60	<5	<10	<0.2	<5	-	15	42	0.06	<5	5	<3	<5	<5	76
BH3-0.1	Fill	SPT Sampler	10/12/24	<5	7	46	<5	<10	<0.2	10	<1	5	18	0.07	<5	9	<3	<5	<5	13
BH4-0.1	Fill	SPT Sampler	10/12/24	<5	42	56	<5	<10	0.4	15	-	21	78	0.06	<5	16	<3	<5	<5	170
BH5-0.1	Fill	SPT Sampler	10/12/24	<5	6	29	<5	<10	<0.2	<5	-	<5	6	<0.05	<5	<5	<3	<5	<5	8
BH5-1.0	Clay	SPT Sampler	10/12/24	<5	<5	53	<5	<10	<0.2	<5	-	<5	5	0.06	<5	<5	<3	<5	<5	5
BH6-0.1	Fill	SPT Sampler	10/12/24	<5	140	91	<5	12	<0.2	24	<1	31	84	0.07	<5	34	<3	<5	25	35
BH7-0.1	Fill	SPT Sampler	10/12/24	<5	<5	40	<5	<10	<0.2	6	<1	<5	9	<0.05	<5	<5	<3	<5	<5	19
Glen Forbes Train Station																				
BH8-0.1	Fill	SPT Sampler	10/12/24	<5	210	40	<5	<10	<0.2	34	<1	32	16	0.06	<5	60	<3	<5	46	32
BH9-0.1	Fill	SPT Sampler	10/12/24	<5	22	35	<5	<10	<0.2	9	<1	12	14	<0.05	<5	6	<3	<5	<5	31
BH9-1.0	Fill	SPT Sampler	10/12/24	<5	59	53	<5	<10	<0.2	11	-	19	21	<0.05	<5	11	<3	<5	<5	40
BH10-0.1	Fill	SPT Sampler	10/12/24	<5	13	73	<5	<10	<0.2	9	-	39	180	0.1	<5	11	<3	<5	<5	71
BH11-0.1	Fill	SPT Sampler	10/12/24	<5	9	38	<5	<10	<0.2	5	-	<5	11	<0.05	<5	<5	<3	<5	<5	9
BH12-0.1	Fill	SPT Sampler	10/12/24	<5	<5	48	<5	<10	<0.2	<5	-	5	15	<0.05	<5	<5	<3	<5	<5	22
Kernot Train Station																				
BH13-0.1	Silt	SPT Sampler	10/12/24	<5	<5	11	<5	<10	<0.2	<5	-	<5	5	<0.05	<5	<5	<3	<5	<5	8
BH14-0.1	Silt	SPT Sampler	10/12/24	<5	58	17	<5	<10	<0.2	6	-	<5	13	<0.05	<5	<5	<3	<5	<5	14
BH15-0.1	Silt	SPT Sampler	10/12/24	<5	<5	14	<5	<10	<0.2	<5	-	<5	10	<0.05	<5	<5	<3	<5	<5	13
BH16-0.1	Fill	SPT Sampler	10/12/24	<5	230	74	<5	<10	<0.2	6	<1	32	230	0.11	<5	7	<3	<5	6	80
BH17-0.1	Fill	SPT Sampler	10/12/24	<5	84	45	<5	19	<0.2	12	<1	17	18	0.08	<5	12	<3	<5	7	16
Woodleigh Train Station																				
BH18-0.1	Fill	SPT Sampler	11/12/24	<5	8	31	<5	<10	<0.2	11	<1	11	40	0.06	<5	13	<3	<5	<5	28
BH19-0.1	Fill	SPT Sampler	11/12/24	<5	11	33	<5	<10	<0.2	23	<1	30	34	0.07	<5	32	<3	<5	<5	58
BH19-0.5	Clay	SPT Sampler	11/12/24	<5	<5	16	<5	<10	<0.2	<5	-	<5	15	<0.05	<5	<5	<3	<5	<5	8
BH20-0.1	Fill	SPT Sampler	11/12/24	<5	11	57	<5	<10	<0.2	6	-	13	39	<0.05	<5	<5	<3	<5	<5	43
BH20-1.0	Clay	SPT Sampler	11/12/24	<5	<5	8	<5	<10	<0.2	<5	-	<5	5	<0.05	<5	<5	<3	<5	<5	<5
BH21-0.1	Fill	SPT Sampler	11/12/24	<5	<5	20	<5	<10	<0.2	<5	<1	<5	11	<0.05	<5	<5	<3	<5	<5	10
BH22-0.1	Fill	SPT Sampler	11/12/24	<5	<5	23	<5	<10	<0.2	<5	<1	<5	11	<0.05	<5	<5	<3	<5	<5	13
Fill Material Upper Limit				-	***20***	-	-	-	***3***	-	***1***	***100***	***300***	***1***	***40***	***60***	***10***	***10***	***50***	***200***
Category D Upper Limit				***75***	***500***	***6250***	***100***	***15000***	***100***	-	***500***	***5000***	***1500***	***75***	***1000***	***3000***	***10000***	***180***	-	***35000***
Category C Upper Limit				***75***	***500***	***6250***	***100***	***15000***	***100***	-	***500***	***5000***	***1500***	***75***	***1000***	***3000***	***10000***	***180***	-	***35000***
Category B Upper Limit				***300***	***2000***	***25000***	***400***	***60000***	***400***	-	***2000***	***20000***	***6000***	***300***	***4000***	***12000***	***40000***	***720***	-	***140000***

All concentrations reported in (mg/kg)

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- Indicates sample not tested / criteria does not exist

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Site: Woolamai to Nyora Rail Trail - Woolamai, Glen Forbes, Kernot and Woodleigh Former Train Stations
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9/01/2025
Job No: 123072/E1
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Sample No.	Soil Matrix	Sample Type	Date Sampled	Monocyclic Aromatic Hydrocarbons						Polyaromatic Hydrocarbons		Total Petroleum Hydrocarbons				
				Benzene	Toluene	Ethylbenzene	Xylene	Styrene	Total MAHs [1]	Benzo(a)Pyrene	Total PAHs [2]	TPHs C6-C9	TPHs C10-C14	TPHs C15-C28	TPHs C29-C36	TPHs C10-C36
Insitu Soils																
Woolamai Train Station																
BH1-0.5	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	<50	<50	<50
BH2-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	110	210	320
BH3-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	2.4	18	<20	<20	<50	92	92
BH4-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	59	81	140
BH5-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	54	54
BH5-1.0	Clay	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH6-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	0.9	<20	<20	210	220	430
BH7-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	<50	110	110
Glen Forbes Train Station																
BH8-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	0.3	<20	<20	120	110	230
BH9-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	<50	<50	<50
BH9-1.0	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH10-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH11-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH12-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	65	65
Kernot Train Station																
BH13-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH14-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	60	60
BH15-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH16-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	75	110	180
BH17-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	0.9	<20	<20	74	69	140
Woodleigh Train Station																
BH18-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	0.4	<20	<20	<50	<50	<50
BH19-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.2	1.4	<20	<20	<50	140	140
BH19-0.5	Clay	SPT Sampler	11/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH20-0.1	Fill	SPT Sampler	11/12/24	-	-	-	-	-	-	<0.1	0.1	<20	<20	<50	96	96
BH20-1.0	Clay	SPT Sampler	11/12/24	-	-	-	-	-	-	<0.1	<0.1	<20	<20	<50	<50	<50
BH21-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	<50	63	63
BH22-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.1	<0.1	<20	<20	<50	<50	<50
Fill Material Upper Limit				***1***	***-***	***-***	***-***	***-***	***7***	***1***	***20***	***100***	***1000***			
Category D Upper Limit				***4***	***3200***	***1200***	***2400***	***120***	***-***	***20***	***50***	***325***	***5000***			
Category C Upper Limit				***4***	***3200***	***1200***	***2400***	***120***	***-***	***40***	***100***	***650***	***10000***			
Category B Upper Limit				***16***	***12800***	***4800***	***9600***	***480***	***-***	***160***	***400***	***2600***	***40000***			

All concentrations reported in (mg/kg)

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded blue indicate those concentrations that have exceeded the upper limit of Category D
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
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1 *Total is sum of reported positive concentrations for MAHs - Total sum of benzene, toluene, ethyl benzene, xylenes (includes ortho, para and meta xylenes) and styrene*

2 *Total is sum of reported positive concentrations for PAHs - Total sum of naphthalene, acenaphthylene, acenaphthene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, fluoranthene, indeno(1,2,3-c,d)pyrene, phenanthrene and pyrene*

\- *Indicates sample not tested / criteria does not exist*

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Site:	Woolamai to Nyora Rail Trail - Woolamai, Glen Forbes, Kernot and Woodleigh Former Train Stations	**Date:**	9/01/2025
Client:	Michael Smith and Associates	**Job No:**	123072/E1
Project	Preliminary Soil Contamination Assessment	**ALS Report No:**	242283

Sample No.	Soil Matrix	Sample Type	Date Sampled	Organochlorine Pesticides					Herbicides	Polychlorinated Biphenyls	Phenols						
				Aldrin + Dieldrin	DDT + DDD + DDE	Chlordane	Heptachlor	Total OCPs [1]	2,4-Dichlorophenoxyacetic acid (2,4-D)	Total PCBs	2 Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	Phenols (Halogenated) [3]	Cresol	Phenols (Non-Halogenated) [4]
Insitu Soils																	
Woolamai Train Station																	
BH1-0.5	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH2-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH3-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH4-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH5-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH5-1.0	Clay	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH6-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH7-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
Glen Forbes Train Station																	
BH8-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH9-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH9-1.0	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH10-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH11-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH12-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
Kernot Train Station																	
BH13-0.1	Silt	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH14-0.1	Silt	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH15-0.1	Silt	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH16-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH17-0.1	Fill	SPT Sampler	10/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
Woodleigh Train Station																	
BH18-0.1	Fill	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH19-0.1	Fill	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH19-0.5	Clay	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH20-0.1	Fill	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH20-1.0	Clay	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
BH21-0.1	Fill	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
BH22-0.1	Fill	SPT Sampler	11/12/24	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<30
Fill Material Upper Limit				***-***	***-***	***-***	***-***	***1***	***-***	***2***	***-***	***-***	***-***	***-***	***1***	***-***	***60***
Category D Upper Limit				***1.2***	***50***	***4***	***1.2***	***10 [2]***	***120***	***2***	***1200***	***800***	***16000***	***80***	***-***	***8000***	***560***
Category C Upper Limit				***1.2***	***50***	***4***	***1.2***	***10 [2]***	***120***	***50***	***1200***	***800***	***16000***	***80***	***10***	***8000***	***560***
Category B Upper Limit				***4.8***	***50***	***16***	***4.8***	***50 [2]***	***480***	*******	***4800***	***3200***	***64000***	***320***	***320***	***32000***	***2200***

All concentrations reported in (mg/kg)

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded blue indicate those concentrations that have exceeded the upper limit of Category D
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B

1 *Total sum of aldrin, hexachlorobenzene, alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, chlordane, DDT, DDD, DDE, dieldrin, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)*
2 *Total sum of hexachlorobenzene(HCB), alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, endrin, endrin aldehyde, heptachlor epoxide, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate)*
3 *Total is sum of reported positive concentrations for Halogenated Phenols - Total sum of 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,6-dichlorophenol, pentachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 2,3,5,6-tetrachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol*
4 *Total is sum of reported positive concentrations for Non-Halogenated Phenols - Total sum of phenol, 2-methylphenol (o-cresol), 3-methylphenol (m-cresol), 4-methylphenol (p-cresol), 2,4-dimethylphenol, 2.4-dinitrophenol, 2-methyl-4,6-dinitrophenol, 2-nitrophenol, 4-nitrophenol, 2-cyclohexyl-4,6-dinitrophenol and dinoseb*
* *Soils containing Polychlorinated Biphenyls must be managed in accordance with Notifiable Chemical Order for Polychlorinated Biphenyls*
\- *Indicates sample not tested / criteria does not exist*

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Site: Woolamai to Nyora Rail Trail - Woolamai, Glen Forbes, Kernot and Woodleigh Former Train Stations
Date: 9/01/2025
Client: Michael Smith and Associates
Job No: 123072/E1
Project Preliminary Soil Contamination Assessment
ALS Report I 242283

Sample No.	Soil Matrix	Sample Type	Date Sampled	Chlorinated Hydrocarbons																		Miscellaneous					
				1,1,1-Trichloroethane	1,1,1,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1-Dichloroethene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloroethene (DCE)	1,4-Dichlorobenzene	Carbon Tetrachloride	Chlorobenzene	Chloroform	Dichloromethane (methylene chloride)	Hexachlorobutadiene	Tetrachloroethene (PCE)	Trichlorobenzene (total)	Trichloroethene (TCE)	Vinyl Chloride	Total Chlorinated Hydrocarbons [1]	2,4-Dinitrotoluene	Di (2 ethylhexyl) phthalate	Ethylene diamine tetra acetic acid (EDTA)	Formaldehyde	Methyl Ethyl Ketone (MEK)	Nitrobenzene
Insitu Soils																											
Woolamai Train Station																											
BH1-0.5	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH2-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH4-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5-1.0	Clay	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH7-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
Glen Forbes Train Station																											
BH8-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH9-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH9-1.0	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kernot Train Station																											
BH13-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH17-0.1	Fill	SPT Sampler	10/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
Woodleigh Train Station																											
BH18-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH19-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH19-0.5	Clay	SPT Sampler	11/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-0.1	Fill	SPT Sampler	11/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20-1.0	Clay	SPT Sampler	11/12/24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
BH22-0.1	Fill	SPT Sampler	11/12/24	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5	<1	<0.1	<0.5	<0.1	<0.5	<1	<1	-	-	-	-	-	-
Fill Material Upper Limit				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	***1***	-	-	-	-	-	-
Category D Upper Limit				***1200***	***400***	***48***	***52***	***120***	***6000***	***12***	***240***	***160***	***12***	***1200***	***240***	***16***	***2.8***	***200***	***120***	***20***	***1.2***	-	***5.2***	***40***	***1000***	***2000***	***8000***	***80***
Category C Upper Limit				***1200***	***400***	***48***	***52***	***120***	***6000***	***12***	***240***	***160***	***12***	***1200***	***240***	***16***	***2.8***	***200***	***120***	***20***	***1.2***	-	***5.2***	***40***	***1000***	***2000***	***8000***	***80***
Category B Upper Limit				***4800***	***1600***	***190***	***210***	***480***	***24000***	***48***	***960***	***640***	***48***	***4800***	***960***	***64***	***11***	***800***	***480***	***80***	***4.8***	-	***21***	***160***	***4000***	***8000***	***32000***	***320***

All concentrations reported in (mg/kg)

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded blue indicate those concentrations that have exceeded the upper limit of Category D
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B

1 *Total sum of carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1- trichloroethane, 1,1,2-trichloroethane, trichloroethene, tetrachloroethene, vinyl chloride and hexachlorobutadiene*

\- *Indicates sample not tested / criteria does not exist*

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Geotechnical Engineers
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Site: Woolamai to Nyora Rail Trail - Woolamai, Glen Forbes, Kernot and Woodleigh Former Train Stations
Date: 9/01/2025
Client: Michael Smith and Associates
Job No: 123072/E1
Project Preliminary Soil Contamination Assessment
ALS Report No: 242283

Sample No.	Soil Matrix	Sample Type	Date Sampled	Chloride	Cyanide (Amenable)	Cyanide (Total)	Fluoride	Iodide	Nitrate	Nitrite	Tributyltin Oxide	pH	*Per- and Polyfluoroalkyl Substances (PFAS) Total Concentration in Soil (mg/kg)*				*Per-*
													PFOS	PFHxS	PFOA	Total PFOS + PFHxS	PFOS
Insitu Soils																	
Woolamai Train Station																	
BH1-0.5	Fill	SPT Sampler	10/12/24	-	-	<5	110	-	-	-	-	7.1	<0.0002	<0.0002	<0.0002	<0.0002	-
BH2-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	6.2	-	-	-	-	-
BH3-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	150	-	-	-	-	6	<0.0002	<0.0002	<0.0002	<0.0002	-
BH4-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	6	-	-	-	-	-
BH5-0.1	Fill	SPT Sampler	10/12/24	1100	-	-	-	-	-	-	-	5.4	<0.0002	<0.0002	<0.0002	<0.0002	-
BH5-1.0	Clay	SPT Sampler	10/12/24	730	-	-	-	-	-	-	-	5.4	-	-	-	-	-
BH6-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	140	-	-	-	-	6.1	-	-	-	-	-
BH7-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	190	-	-	-	-	5.8	<0.0002	<0.0002	<0.0002	<0.0002	-
Glen Forbes Train Station																	
BH8-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	170	-	-	-	-	6.6	0.0003	<0.0002	<0.0002	0.0003	-
BH9-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	180	-	-	-	-	5.9	<0.0002	<0.0002	<0.0002	<0.0002	-
BH9-1.0	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	6.7	-	-	-	-	-
BH10-0.1	Fill	SPT Sampler	10/12/24	16	-	-	-	-	-	-	-	6	-	-	-	-	-
BH11-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	6	<0.0002	<0.0002	<0.0002	<0.0002	-
BH12-0.1	Fill	SPT Sampler	10/12/24	-	-	-	-	-	-		-	5.7	0.0002	<0.0002	<0.0002	0.0002	-
Kernot Train Station																	
BH13-0.1	Silt	SPT Sampler	10/12/24	30	-	-	-	-	-	-	-	4.9	<0.0002	<0.0002	<0.0002	<0.0002	-
BH14-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	5.6	-	-	-	-	-
BH15-0.1	Silt	SPT Sampler	10/12/24	-	-	-	-	-	-	-	-	4.9	0.0005	<0.0002	<0.0002	0.0005	-
BH16-0.1	Fill	SPT Sampler	10/12/24	-	-	<5	150	-	-	-	-	5.8	**0.23**	**0.032**	<0.002 LORR	0.26	-
BH17-0.1	Fill	SPT Sampler	10/12/24	9	-	<5	160	-	-	-	-	6	0.0004	<0.0002	<0.0002	0.0004	-
Woodleigh Train Station																	
BH18-0.1	Fill	SPT Sampler	11/12/24	-	-	<5	190	-	-	-	-	5.8	0.0003	<0.0002	<0.0002	0.0003	-
BH19-0.1	Fill	SPT Sampler	11/12/24	37	-	<5	190	-	-	-	-	6	0.0003	<0.0002	<0.0002	0.0003	-
BH19-0.5	Clay	SPT Sampler	11/12/24	64	-	-	-	-	-	-	-	6.2	-	-	-	-	-
BH20-0.1	Fill	SPT Sampler	11/12/24	-	-	-	-	-	-	-	-	5.4	-	-	-	-	-
BH20-1.0	Clay	SPT Sampler	11/12/24	-	-	-	-	-	-	-	-	5.5	-	-	-	-	-
BH21-0.1	Fill	SPT Sampler	11/12/24	-	-	<5	160	-	-	-	-	5.4	0.0003	<0.0002	<0.0002	0.0003	-
BH22-0.1	Fill	SPT Sampler	11/12/24	-	-	<5	150	-	-	-	-	6	<0.0002	<0.0002	<0.0002	<0.0002	-
Fill Material Upper Limit				***-***	***-***	***50***	***450***	***-***	***-***	***-***	***-***	***4-10***	***0.002***	***0.001***	***0.001***	***-***	***-***
Category D Upper Limit				***-***	***300***	***2500***	***10000***	***-***	***-***	***-***	***2.5***	***-***	***-***	***-***	***10***	***1***	***-***
Category C Upper Limit				***-***	***300***	***2500***	***10000***	***-***	***-***	***-***	***2.5***	***-***	***-***	***-***	***50***	***20***	***-***
Category B Upper Limit				***-***	***1200***	***10000***	***40000***	***-***	***-***	***-***	***10***	***2-12.5***	***-***	***-***	***50***	***50***	***-***

All concentrations reported in (mg/kg)

Figures shaded green indicate those concentrations that have exceeded the upper limit of fill material
Figures shaded blue indicate those concentrations that have exceeded the upper limit of Category D
Figures shaded yellow indicate those concentrations that have exceeded the upper limit of Category C
Figures shaded orange indicate those concentrations that have exceeded the upper limit of Category B
- *Indicates sample not tested / criteria does not exist*

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Site: Woolamai to Nyora Rail Trail
Client: Michael Smith and Associates
Project Preliminary Soil Contamination Assessment

Date: 9-Jan-25
Job No: 123072 E1
ALS Report No: 242283

Analtye	*Per and Poly-Fluoroalkyl Substances (PFAS)*																																		
	Perfluorooctane Sulfonate (PFOS) / PFHxS	Perfluorooctanoic Acid (PFOA)	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSA	EtFOSA	MeFOSE	EtFOSE	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS	Sum of PFAS	Sum of PFHxS & PFOS	Sum of PFAS (WA DER)
Interim soil – ecological indirect exposure (Industrial land use) (HEPA 2020[1])	**0.14[2]**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interim soil – ecological direct exposure (All land uses) (HEPA 2020[1])	**1**	**10**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interim soil – ecological indirect exposure (All land uses) (HEPA 2020[1])	**0.01**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interim soil – Residential with minimal opportunities for soil access (HEPA 2020[1])	**2**	**20**	-	-	-	-	-	-	-	-	-	-	**20**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health – Residential with garden / accessible soil (HEPA 2020 [1])	**0.01**	**0.1**	-	-	-	-	-	-	-	-	-	-	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health – Public open space (HEPA 2020 [1])	**1**	**10**	-	-	-	-	-	-	-	-	-	-	**10**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Human Health - Industrial / Commercial	**20**	**50**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample No.	***Date Sampled***	***Sample Depth (mbgl)***	***Soil Matrix***	***Investigation Type***	***Insitu Soils***																														
Woolamai Train Station																																			
BH1-0.5	10/12/24	0.5	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH3-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH5-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH7-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0003	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
Glen Forbes Train Station																																			
BH8-0.1	10/12/24	0.1	Fill	SPT Sampler	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003
BH9-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH11-0.1	10/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH12-0.1	10/12/24	0.1	Fill	SPT Sampler	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	0.0002	0.0002
Kernot Train Station																																			
BH13-0.1	10/12/24	0.1	Silt	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
BH15-0.1	10/12/24	0.1	Silt	SPT Sampler	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.0005	0.0005
BH16-0.1	10/12/24	0.1	Fill	SPT Sampler	**0.26**	<0.002 LORR	<0.002 LORR	<0.002 LORR	0.032	<0.002 LORR	0.23	0.042	<0.01 LORR	<0.002 LORR	0.0054	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.002 LORR	<0.005 LORR	0.009	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.002 LORR	<0.002 LORR	<0.005 LORR	<0.005 LORR	<0.005 LORR	<0.005 LORR	0.32	0.26	0.27
BH17-0.1	10/12/24	0.1	Fill	SPT Sampler	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0004	0.0004	0.0004
Woodleigh Train Station																																			
BH18-0.1	11/12/24	0.1	Fill	SPT Sampler	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003
BH19-0.1	11/12/24	0.1	Fill	SPT Sampler	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003
BH21-0.1	11/12/24	0.1	Fill	SPT Sampler	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.0003	0.0003
BH22-0.1	11/12/24	0.1	Fill	SPT Sampler	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002

All concentrations reported in mg/kg

[1] *(HEPA 2020) The Heads of EPAs Australia and New Zealand (HEPA) PFAS National Environmental Management Plan - Version 2 - Adopted May 2020 by Federal Department of Agriculture, Water and the Environment*

[2] *Higher criterion of 0.14 mg/kg was adopted in this scenario due to site being within an industrial zoning and thereby having lower potential for indirect ecological exposure of secondary consumers*

- Denotes that analyte was not tested or screening criteria is not available

Indicates exceedance of limit of reporting

APPENDIX E

Soil Sample Quality Assurance and Quality Control Check

Soil Sample Quality Assurance & Quality Control Check

Contaminants	Primary Duplicates			Secondary Duplicates		
	BH7-0.1	Blind A	RPD (%)	BH7-0.1	Dup-BH7-0.1	RPD (%)
Organochlorine Pesticides						
4.4'-DDD	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDE	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDT	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
a-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Aldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
b-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Chlordane	<0.05	<0.05	#VALUE!	<0.05	<0.1	#VALUE!
d-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Dieldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan I	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan II	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan Sulphate	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Aldehyde	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Ketone	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
g-BHC (Lindane)	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor epoxide	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Hexachlorobenzene	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Methoxychlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!

Table 1: Calculation of Primary & Secondary Duplicate RPD Values for Soil Sample BH7-0.1 (mg/kg)

Soil Sample Quality Assurance & Quality Control Check

Contaminants	Primary Duplicates			Secondary Duplicates		
	BH5-1.0	Blind B	RPD (%)	BH5-1.0	Dup-BH5-1.0	RPD (%)
Organochlorine Pesticides						
4.4'-DDD	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDE	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDT	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
a-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Aldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
b-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Chlordane	<0.05	<0.05	#VALUE!	<0.05	<0.1	#VALUE!
d-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Dieldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan I	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan II	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan Sulphate	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Aldehyde	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Ketone	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
g-BHC (Lindane)	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor epoxide	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Hexachlorobenzene	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Methoxychlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!

Table 2: Calculation of Primary & Secondary Duplicate RPD Values for Soil Sample BH5-1.0 (mg/kg)

Soil Sample Quality Assurance & Quality Control Check

Contaminants	Primary Duplicates			Secondary Duplicates		
	BH20-1.0	Blind D	RPD (%)	BH20-1.0	Dup-BH20-1.0	RPD (%)
Organochlorine Pesticides						
4.4'-DDD	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDE	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
4.4'-DDT	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
a-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Aldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
b-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Chlordane	<0.05	<0.05	#VALUE!	<0.05	<0.1	#VALUE!
d-BHC	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Dieldrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan I	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan II	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endosulfan Sulphate	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Aldehyde	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Endrin Ketone	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
g-BHC (Lindane)	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Heptachlor epoxide	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Hexachlorobenzene	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!
Methoxychlor	<0.05	<0.05	#VALUE!	<0.05	<0.05	#VALUE!

Table 3: Calculation of Primary & Secondary Duplicate RPD Values for Soil Sample BH20-1.0 (mg/kg)

A.S. James Data Quality Objectives:

- Relative Percentage Differences (RPDs) +/- 50%.
- Spikes falling within range of 70-130% for organics & 85-115% for metals.
- Duplicates within range of +/- 30% for both metals & organics.
- Laboratory equipment blanks expected to be below detection limit

Sample Type	Total No. of Results	No. of Results not Meeting Data Quality Objectives	Percentage of Results Meeting Data Quality Objectives
Laboratory Duplicates	425	0	**100.00**
Laboratory Spikes	303	19	**93.73**
Method Blanks	455	0	**100.00**
Primary Duplicates	60	0	**100.00**
Secondary Duplicates	60	0	**100.00**
Overall Completeness	**1303**	**19**	**98.54**

Table 4: Summary of Quality Assurance Completeness

APPENDIX F

Equipment Calibration Certificate

PID Calibration Certificate 53.0 3122024M

Instrument Tiger
Serial No. T-118247

Air-Met Scientific Pty Ltd
1800 000 744

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Filter	✓	
	Flow	✓	
	Valves, Diaphragm	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	PID	✓	10.6 eV
Alarms	Beeper	✓	**Low** | **High** | **TWA** | **STEL**
	Settings	✓	50ppm | 100ppm | 100ppm | 250ppm
Software	Version	✓	
Data logger	Operation	✓	
Download	Operation	✓	
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		98ppm Isobutylene	NIST	ME1170		98ppm Isobutylene

Calibrated by: Rory McGurk

Calibration date: **3/12/2024**

Next calibration due: **1/06/2025**

APPENDIX G

Site Specific Derived Ecological Investigation Levels

Chemical	*Site Specific Ecological Investigation Levels for urban residential and public open space Land Use (mg/kg)*			
	Woolamai Site Soils	Glen Forbes Site Soils	Kernot Site Soils	Woodleigh Site Soils
Arsenic	100	100	100	100
DDT	180	180	180	180
Naphthalene	170	170	170	170
Lead	1100 + 35 = 1135	1100 + 35 = 1135	1100 + 35 = 1135	1100 + 35 = 1135
Chromium III	410 + 10 = 420	410 + 10 = 420	410 + 10 = 420	410 + 10 = 420
Copper	35 + 10 = 45	210 + 10 = 220	100 + 10 = 110	160 + 10 = 170
Nickel	180 + 5 = 185	200 + 5 = 205	180 + 5 = 185	170 + 5 = 175
Zinc	460 + 40 = 500	490 + 40 = 530	250 + 40 = 290	370 + 40 = 410

ACL - added contaminant limit

ABC - ambient background concentration

The most stringent ACL values were adopted for Chromium (III), Copper, Lead, Nickel and Zinc, as site soil physicochemical properties (i.e. pH, CEC and clay content) were not tested (Ref: NEPM 2013 Schedule B1

[1] *Assumed values are based on NEPM 2013 Schedule B5© Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel and Zinc*

[2] *EIL = ABC + ACL, unless Generic EIL is applicable*