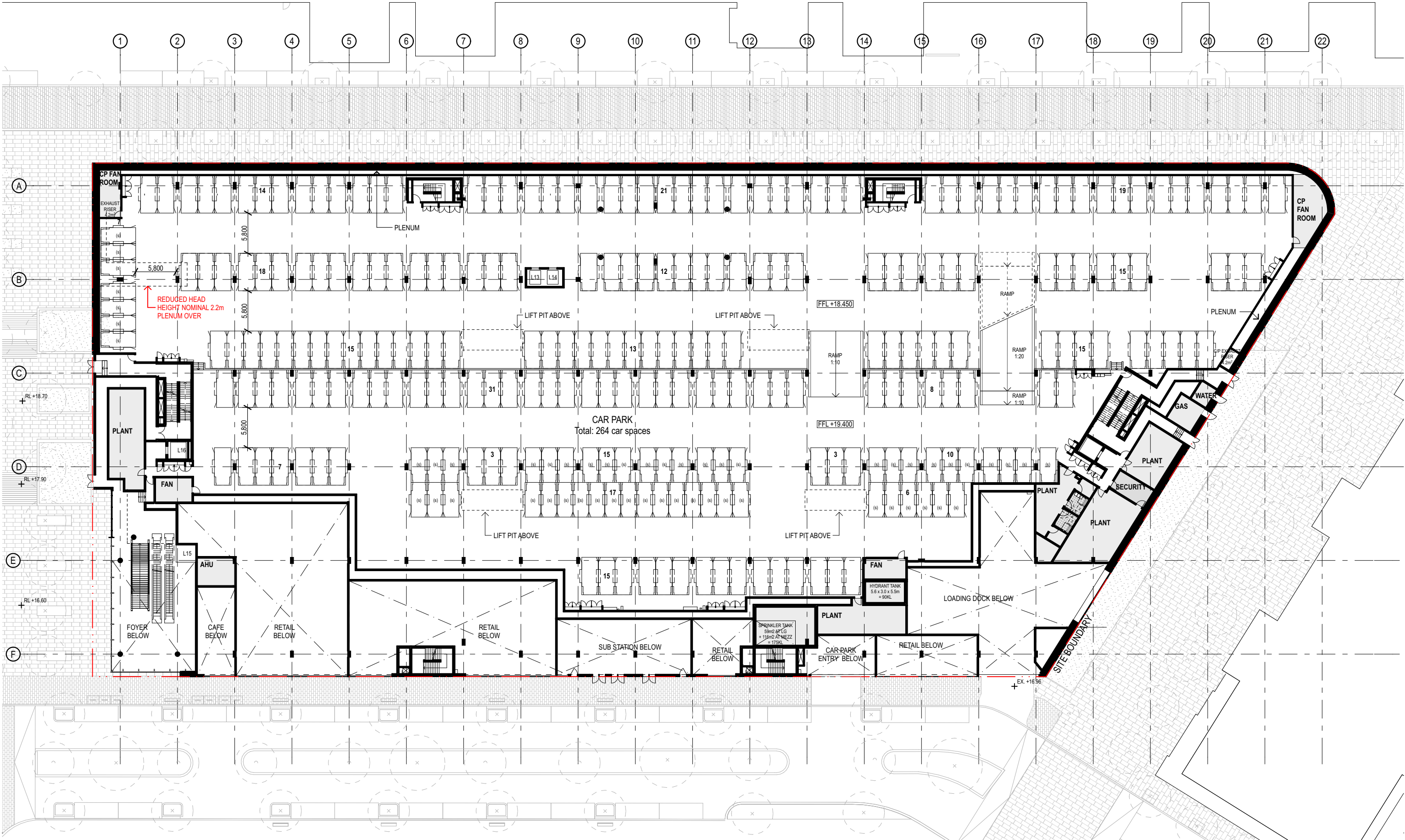
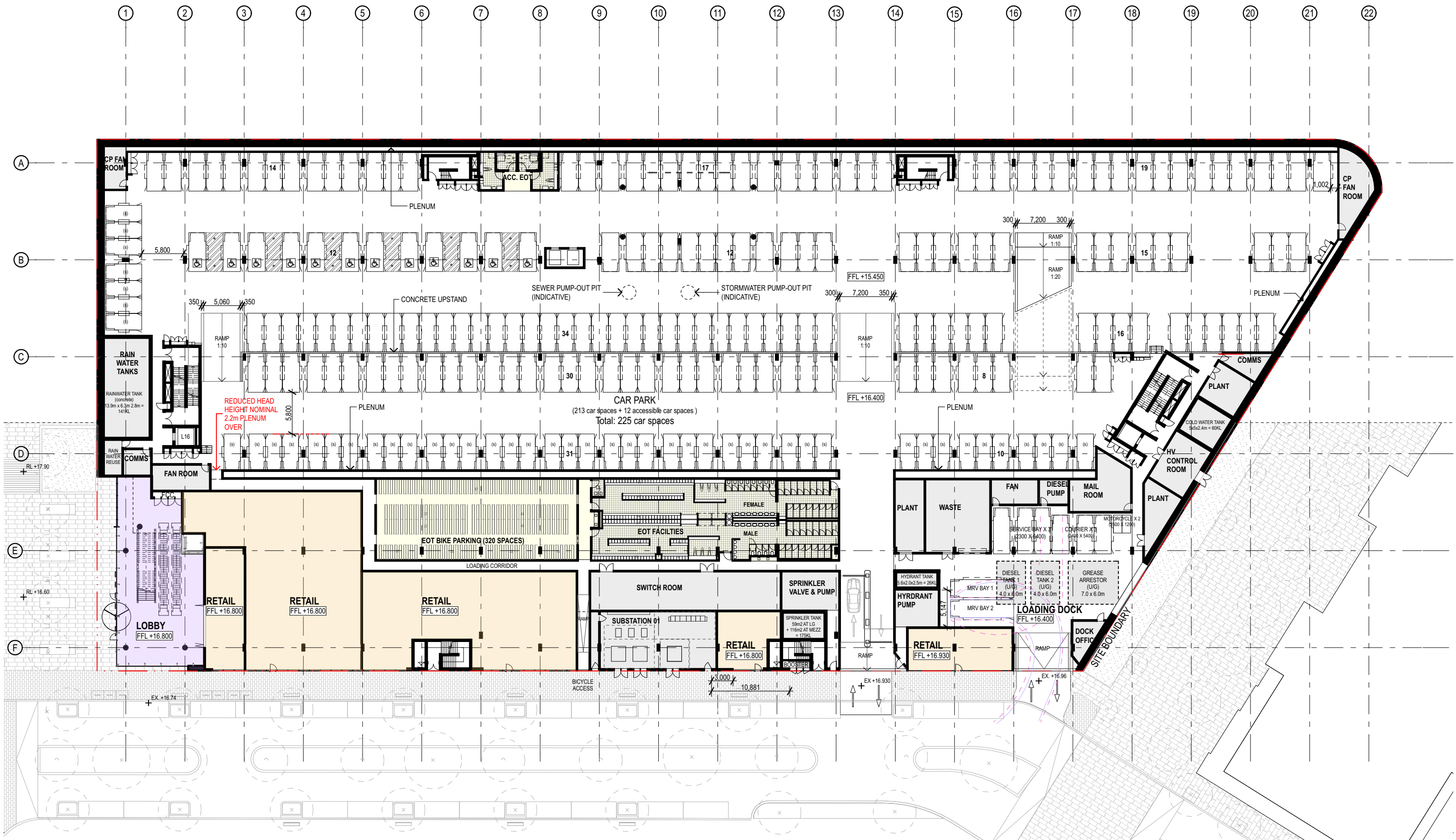
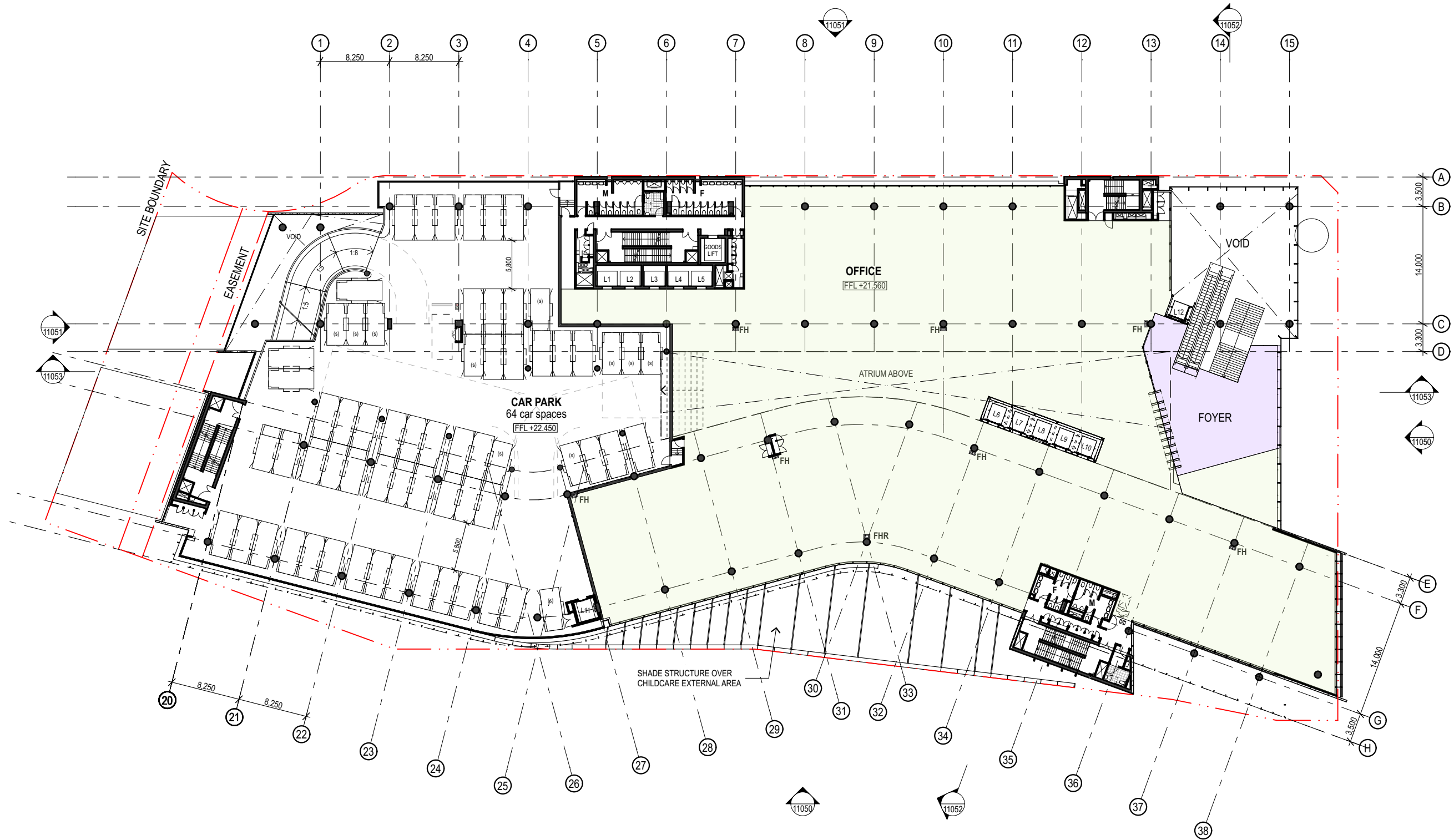






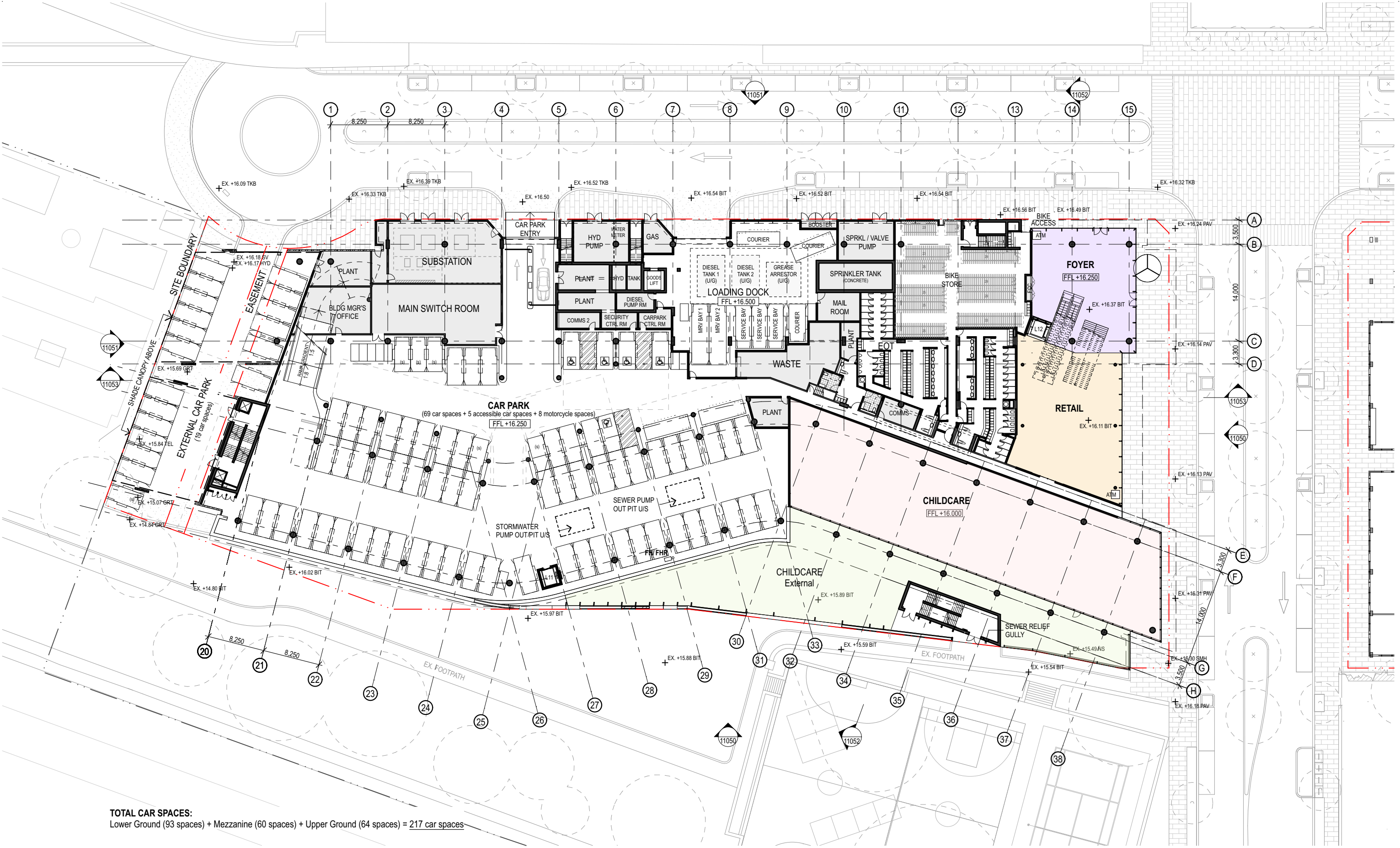


TOTAL CAR SPACES:
Lower Ground (93 spaces) + Mezzanine (60 spaces) + Upper Ground (64 spaces) = 217 car spaces

MIRVAC - AUSTRALIAN TECHNOLOGY PARK - BUILDING 1



For Approval fjmt-AR-DWG-1100M_DAO



Appendix B JBS&G (2016c) Fill Retention Documentation

27 May 2016

Barry Steedman
Mirvac Projects Pty Ltd
Via email: barry.steedman@mirvac.com

Retention of Lot 12 Fill Materials - Factual Data Report

Dear Barry,

1. Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) has been engaged by Mirvac Projects Pty Ltd (Mircvac, the client) to provide environmental consultancy services associated with the remediation and redevelopment of a portion of the Australian Technology Park (ATP), herein referred to as the site (**Figures 1 and 2, Attachment 2**). The site is legally identified as Lots 8, 9, 12 in Deposited Plan (DP) 1136859, Part Lot 13 in DP 1136859 and Part Lot 10 in DP 1136859 (**Figure 3, Attachment 2**) and occupies an area of 11.6 ha. The site includes the Locomotive Workshop, public roads/domains (road reserves and pedestrian easements, recreational facilities and the eastern most extent of Lot 10 DP 1136859) and Developable Lots (Lots 8, 9 and 12). With the notable exception of the Locomotive Workshop, the footprints of existing ATP precinct structures (including the International Business Centre, National Innovation Centre, Traffic Management Centre (formally the RTA Building), Ambulance Service Building and Biomedical Building footprints) within Lot 13 in DP 113659 fall outside the site boundaries, as shown on **Figure 2 (Attachment 2)**.

During site preparation works, Mirvac have identified the potential for retention of surplus fill materials resultant from site development activities to minimise waste generation and help achieve a green star rating. Specifically, Mirvac has identified the potential to retain fill materials resultant from Lot 12 development activities underlying the proposed commercial building footprint.

As part of JBS&G's engagement, Mirvac has requested JBS&G undertake assessment of fill within Lot 12 for potential ecological suitability for on-site retention. This letter report presents the data obtained in a factual manner to enable subsequent assessment to be undertaken.

2. Objective

The objective of the investigation is to document the concentration of soil contaminants within Lot 12. The results of the investigation will be used to assist in the preparation of a subsequent ecological risk assessment (ERA) for proposed redevelopment of the site.

The secondary objective of the assessment was to assess the potential occurrence of acid sulphate soils (ASS)/potential acid sulphate soils (PASS) with natural soils at depth within Lot 12.

3. Site History and Setting

A detailed review of the site setting and history is presented in JBS&G (2015a¹). Relevant information to this assessment is summarised herein.

3.1 Locomotive Workshop Location, Description and Proposed Retention Details

Lot 12 in Deposited Plan 1136859 (the assessment area) is located within the central site extent and occupies an area of approximately 11 850 m².

Lot 12 is largely level, surfaced with bituminous concrete pavements with minor areas of exposed soils (garden beds). Lot 12 is noted to comprise two tiers, an upper level flush with the Locomotive Street road frontage, and a low level flush with the Central Avenue road frontage. An earthen/concrete embankment retaining wall of approximately 3 m in height separates the two tiers. Lot 12 is currently used as an overflow car parking facility.

Development of Lot 12 is proposed to accommodate a seven storey building comprising of parking, retail and commercial uses. The carpark will be partially sunken and constructed at-grade given the tiered site topography. A portion of materials from the 'upper tier' of the current carpark at Lot 12 will require excavation to achieve design levels.

The concrete slab of the future building will serve as a physical barrier to retained fill. Surface treatments external to the building are proposed to comprise hardstands (paved areas underlain by a concrete slab or similar). No landscaping (garden beds or similar) is proposed.

No direct exposures will be present following site development activities. A marker layer will underlie physical barriers (hardstands), denoting the extent of retained fill. Details of the remedial strategy proposed in this portion of the site are documented in the remedial action plan (RAP, JBS&G 2016a²).

Based on communications with Mirvac, suitable surplus fill materials resultant from Lot 12 development works are proposed to be retained beneath the commercial building to be constructed on Lot 12.

As discussed above, the surface elevation of Lot 12 are currently split between the upper car park at approximately relative level (RL) 21.5 m Australian Height Datum (AHD) and the lower car park at RL 16 m AHD to 17 m AHD. The proposed construction basal level for the proposed multi-storey commercial building range from RL 15.45 m AHD within the northern Lot extent to RL 16.4 m AHD within the southern Lot extent.

To minimise waste generation and help achieve a green star rating, Mirvac propose to excavate fill materials, natural soils and bedrock to depths ranging to approximately 9 AHD m to 11 m AHD. The proposed excavation location/layout is shown on **Figure 4 (Attachment 2)**.

As discussed in JBS&G (2016a), fill materials have been reported to be approximately 4.0 m to 6.0 m thick within the north Lot extent (northern car park) and approximately 1.5 m to 2.0 m thick within the southern Lot extent (southern car park).

Excavated natural soils (clay) and bedrock are proposed to be beneficially reused within the broader site. Excavated fill materials from Lot 12 are proposed to be retained in the Lot 12 excavation.

¹ Mirvac Projects Pty Ltd – Australian Technology Park Detailed Site Assessment, 2 Locomotive Street, Eveleigh NSW. JBS&G Australia Pty Ltd dated 9 December 2015 (JBS&G 2015a)

² Mirvac Projects Pty Ltd – Australian Technology Park Remedial Action Plan, 2 Locomotive Street, Eveleigh NSW. JBS&G Australia Pty Ltd dated 27 May 2016 Revision D (JBS&G 2016a)

Based on the above, it is anticipated approximately 39 000 m³ of fill materials are proposed to be retained.

Based on review of JBS&G (2015a), groundwater beneath Lot 12 has been reported at depths of approximately RL 10 m AHD to RL 13 m AHD, possibly seasonally influenced and perched within fill materials and natural clay soils.

As such, based on the above, should fill materials be retained, potential remain for materials currently above the saturated zone to be placed below the water table.

4. Methodology

4.1 Fill and ASS/PASS Assessment Activities

As discussed above, fill materials across the entire Lot 12 extent are proposed to be excavated and retained below the future Lot 12 multi storey commercial building. Furthermore, fill materials currently above the water table may be re-instated below the water table. As such, sampling on a systematic grid basis skewed to areas of historical elevated total and/or toxicity characteristic leaching procedure (TCLP) contaminant concentrations was considered the most appropriate methodology to assess suitability of fill materials for retention beneath the proposed commercial development.

Sampling was conducted at eighteen locations via the use of a drill rig fitted with a 100 mm solid flight auger and push tube attachments.

A jar and 1 kg bulk sample was collected at each sample location, per 1.0 m in depth, until the program depth was achieved (natural soils) or prior refusal. Samples were submitted for a variety of organic and inorganic contaminants, and heavy metal, total recoverable hydrocarbons (TRH) and polycyclic aromatic hydrocarbons (PAH) Australian standard leaching procedure (ASLP) analysis. Selected soil samples of natural material were also analysed for PASS/ASS (SPOCAS).

Given the aggressiveness of ASLP analysis and potential to over predict potential rates of leaching of soils, and to replicate the excavation, stockpiling and homogenisation process as a result of earth works, JBS&G also submitted six 5 kg samples of fill materials for column leach analysis in accordance with ASTM (D4874-95³).

Bulk samples were amassed as follows:

- Samples from BH03/0-1.0, BH04/0-1.0, BH05/0-1.0, BH06/0-1.0 and BH07/0-1.0 were combined and submitted for analysis;
- Samples from BH03/1.0-2.0, BH04/1.0-2.0, BH05/1.0-2.0 and BH07/1.0-2.0 were combined and submitted for analysis;
- Samples from BH09/0-1.0, BH10/0-1.0, BH12/0-1.0, BH13/0-1.0 and BH14/0-1.0 were combined and submitted for analysis;
- Samples from BH09/1.0-2.0, BH10/1.0-2.0, BH12/1.0-2.0 and BH13/1.0-2.0 were combined and submitted for analysis;
- Samples from BH08/0-1.0, BH15/0-1.0, BH16/0-1.0, BH17/0-1.0 and BH18/0-1.0 were combined and submitted for analysis; and

³ ASTM Designation: D4874-95 (Reapproved 2014) – Standard Test Method for Leaching Solid Material in a Column Apparatus (ASTM D4875-95).

- Samples from BH08/1.0-2.0, BH15/1.0-2.0, BH16/1.0-2.0, BH17/1.0-2.0 and BH18/1.0-2.0 were combined and submitted for analysis.

As per the ASTM D4874-95, the laboratory was instructed to apply distilled water to the top of the columns, and collect the leachate for analysis at approximately one, two, four and eight pore volumes.

During laboratory analysis, the laboratory collected and analysed the accumulative pore volumes eluted from each column over a 24 hour period. Upon receipt of the results, JBS&G requested that the samples be rerun as per the ASTM D4874-95 and collected at one, two, four and eight pore volumes.

Leachate samples were filtered through a 0.45 µm filter subsequent to collection.

Based on the sampling density (1 sample/per approx. 1 000 m³ of fill material (ASLP and column test) completed, sufficient sampling and analysis is considered to have been completed to allow an assessment of fill contaminant conditions, specifically leachability potential.

Four samples were submitted for SPOCAS to allow assessment of ASS/PASS properties.

Field logs documenting encountered lithology are presented in **Attachment 4**. In summary fill materials were identified to be underlain by clay soil and in turn shale bedrock.

4.2 Laboratory Analysis

JBS&G contracted project laboratories which are NATA accredited for the required analyses. Primary samples were sent to Eurofins MGT Pty Ltd (Eurofins) and secondary samples sent to Envirolab Services Pty Ltd (Envirolab). In addition to laboratory quality requirements, the laboratories were required to meet JBS&G's internal Quality Assurance requirements. The analytical schedule is presented in **Table 4.1**.

Table 4.1: Analytical Schedule

Sample Type	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil (fill and natural)	Eighteen sample locations	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 46 samples PAH – 46 samples TRH – 46 samples BTEX – 20 samples VOCs – 20 Samples Asbestos – 19 samples OCPs/PCBs – 19 samples ASLP (metals/PAHs) – 36 samples Silica Gel Clean Up – 4 samples SPOCAS – 4 samples
Water (bulk sample (leachability assessment)	6 bulk samples were submitted from which leachate samples at one, two, four and eight pore volumes was requested	ASTM (D4874-95) heavy metals ASTM (D4874-95) TRH ASTM (D4874-95) PAHs

In addition to the above analyses, for QA/QC purposes field duplicates and triplicates were analysed at a rate of 1/20 primary samples for primary fill soil samples. Rinsate samples were obtained from non-disposable sampling equipment, plus a single trip spike and single trip blank accompanied the soil sampling event.

4.3 Quality Assurance / Quality Control

The pre-determined data quality indicators (DQIs) established for the project are discussed below in relation to precision, accuracy, representativeness, comparability and completeness (PARCCs parameters), and are shown in **Table 4.2**.

- **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 data set 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 4.2: Summary of Quality Assurance / Quality Control (QA/QC) Program

Data Quality Indicator	Frequency	Data Quality Criteria
Precision		
Blind duplicates (intra laboratory)	1 / 20 samples	<50% RPD ¹
Split duplicates (inter laboratory)	1 / 20 samples	<50% RPD ¹
Laboratory duplicates	1 / 20 samples	<50% RPD ¹
Accuracy		
Surrogate spikes	All organic samples	70-130%
Laboratory control samples	1 per lab batch	<LOR
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes		-
Samples extracted and analysed within holding times.	-	organics (14 days), inorganics (6 months)
Trip spike	1 per sampling batch	70-130% recovery
Storage blank	1 per sampling batch	<LOR
Laboratory blank	1 per sampling batch	<LOR
Rinsate blank	1 per sampling batch	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All samples	All samples
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 COCs 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 Quality Indicator	Frequency	Data Quality Criteria
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

1 Relative percent difference

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.

5. Summary of QA / QC Results

5.1 QA / QC Results

The QA / QC results are summarised in **Table 5.1**, presented in **Attachment 4** and discussed in **Section 5.2**. Laboratory certificates of analysis are provided in **Attachment 5**.

Table 5.1: Summary of QA/QC Results

Data Quality Indicator	Results	DQO met?
Precision		
Blind duplicates (intra laboratory)	0-196% RPD The primary and duplicate samples targeting asbestos were in agreement. Intra laboratory samples were analysed at a rate of 1 in 20 samples. 3/46 samples for metals, PAH, TRH (6.5%), 2/20 samples for BTEX and VOCs (10%) and 2/19 samples for asbestos, OCPs and PCBs (10.5%).	Partial ¹
Blind duplicates (inter laboratory)	0-198 % RPD The primary and duplicate samples targeting asbestos were in agreement. Intra laboratory samples were analysed at a rate of 1 in 20 samples. 3/46 samples for metals, PAH, TRH (6.5%), 2/20 samples for BTEX and VOCs (10%) and 2/19 samples for asbestos, OCPs and PCBs (10.5%).	Partial ¹
Laboratory duplicates	0-50% RPD Intra laboratory samples were analysed at a rate of 1 in 20 samples.	Yes
Accuracy		
Laboratory control samples	70 - 130% recovery 1 per lab batch	Yes
Surrogate spikes	50-135% 1 per lab batch	Partial ¹
Matrix spikes	70 - 130% recovery 1 per lab batch	Yes
Representativeness		
Samples extracted and analysed within holding times.	All primary and duplicate samples were extracted within appropriate holding times	Yes
Appropriate media for analysis	Appropriate media was sampled and submitted for analysis	Yes
Trip spike	92-98 % recovery 1 per lab batch	Yes
Storage blank	<LOR 1 per lab batch	Yes
Rinsate blank	<LOR A rinsate blank was collected during the soil sampling event.	Yes
Standard operating procedures for sample collection & handling	A single field staff member used same standard operating procedures throughout works.	Yes
Comparability		
Standard analytical methods used for all analyses	Standard analytical methods used as detailed in Appendix D . It is noted that no laboratory in NSW is NATA accredited for ASTM (D4874-95) analysis.	Partial ¹

Data Quality Indicator	Results	DQO met?
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by the same field staff members. Standard operating procedures were conducted throughout the works. Field conditions remained the same throughout the works. The primary and secondary labs remained consistent throughout the investigation.	Yes
Limits of reporting appropriate and consistent	Limits of reporting were consistent and appropriate.	Yes
Completeness		
Soil description and COCs completed and appropriate	All field logs and COCs were completed appropriately.	Yes
Appropriate documentation	All field documentation was appropriately completed.	Yes
Satisfactory frequency and result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples	Samples were analysed at locations where potential for contamination was observed.	Yes
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	Analytical methods and limits of recovery were considered appropriate for media and adopted site assessment criteria for all soil analytes.	Yes

Notes:

¹ See discussion of DQI exceedances below.

5.2 Soil QA/QC Discussion

5.2.1 Precision

Soil Blind Duplicates (intra laboratory)

The rates of blind duplicate sampling and analysis for soils was 3 blind duplicate samples for heavy metals, PAH, TRH (6.5%), two blind duplicate samples for BTEX and VOCs (10%) and two blind duplicate samples for asbestos, OCPs and PCBs (10.5%).

RPDs were generally within the DQI with the exception of the following:

- Chromium in soil sample BH05/3.5-4.0 (13 mg/kg) and QC01 (32 mg/kg) with a RPD of 84 mg/kg;
- Copper in soil sample BH05/3.5-4.0 (530 mg/kg) and QC01 (<5 mg/kg) with a RPD of 196 mg/kg;
- Lead in soil sample BH05/3.5-4.0 (150 mg/kg) and QC01 (6.6 mg/kg) with a RPD of 183 mg/kg;
- Nickel in soil sample BH05/3.5-4.0 (16 mg/kg) and QC01 (<5 mg/kg) with a RPD of 105 mg/kg;
- Zinc in soil sample BH05/3.5-4.0 (220 mg/kg) and QC01 (<5 mg/kg) with a RPD of 191 mg/kg;
- Arsenic in soil sample BH07/3.0-4.0 (3.6 mg/kg) and QC02 (54 mg/kg) with a RPD of 175 mg/kg; and
- Lead in soil sample BH07/3.0-4.0 (20 mg/kg) and QC02 (<5 mg/kg) with a RPD of 175 mg/kg.

High RPDs can be expected in heterogeneous materials including soils impacted with slag which have not been homogenised or when analyte concentrations are close to the LOR. As such, the elevated RPDs are considered not to affect the overall reliability and precision of the data set.

Soil Split Duplicates (inter laboratory)

The rates of split blind duplicate sampling and analysis for soils was 3 blind duplicate samples for heavy metals, PAH, TRH (6.5%), two blind duplicate samples for BTEX and VOCs (10%) and two blind duplicate samples for asbestos, OCPs and PCBs (10.5%).

RPDs were generally within the DQI with the exception of the following:

- Copper in soil sample BH05/3.5-4.0 (530 mg/kg) and QC01A (2 mg/kg) with a RPD of 198 mg/kg;
- Lead in soil sample BH05/3.5-4.0 (150 mg/kg) and QC01A (10 mg/kg) with a RPD of 175 mg/kg;
- Nickel in soil sample BH05/3.5-4.0 (16 mg/kg) and QC01A (<1 mg/kg) with a RPD of 176 mg/kg;
- Zinc in soil sample BH05/3.5-4.0 (220 mg/kg) and QC01A (<1 mg/kg) with a RPD of 198 mg/kg;
- Arsenic in soil sample BH07/3.0-4.0 (3.6 mg/kg) and QC02A (101 mg/kg) with a RPD of 101 mg/kg;
- Chromium in soil sample BH07/3.0-4.0 (13 mg/kg) and QC02A (5 mg/kg) with a RPD of 89 mg/kg;
- Copper in soil sample BH07/3.0-4.0 (7.7 mg/kg) and QC02A (3 mg/kg) with a RPD of 88 mg/kg;
- Benzo(a)pyrene TEQ in soil sample BH05/3.5-4.0 (1.2 mg/kg) and QC01A (<0.5 mg/kg) with a RPD of 198 mg/kg;
- Benzo(a)pyrene TEQ in soil sample BH07/3.0-4.0 (1.2 mg/kg) and QC02A (<0.5mg/kg) with a RPD of 175 mg/kg; and
- Benzo(a)pyrene TEQ in soil sample BH12/36.5-7(1.2 mg/kg) and QC03A (<0.5 mg/kg) with a RPD of 175 mg/kg.

Similar to the blind duplicates, high RPDs can be expected in heterogeneous materials, soils containing slag or when analyte concentrations are close to the LOR. As such, the elevated RPDs are considered not to affect the overall reliability or precision of the data set.

The results of analysis with RPDs outside the DQIs have been evaluated with respect to the assessment criteria presented in JBS&G (2016a) and where necessary the contaminant concentration in the duplicate samples have been taken into consideration with respect to assessment.

Laboratory Duplicates

Laboratory duplicates RPDs were all within the JBS&G acceptable limit (0-50%). A total of 27 laboratory duplicate samples were conducted which met the DQIs for soil sampling (1 in 20).

5.2.2 Accuracy

Laboratory Control Samples

All laboratory control samples were reported as having recoveries within the JBS&G acceptable range of 70-130%. A total of 20 laboratory control samples were conducted which met the DQIs for soil sampling (1 in 20).

Surrogate Spikes

All surrogate spikes reported recoveries within the JBS&G acceptable range of 70-130%. Surrogate spikes were conducted for all organic samples.

Matrix Spikes

All matrix spikes reported recoveries within the JBS&G acceptable range of 70-130%. A total of 20 matrix spikes were conducted which met the DQIs for soil sampling (1 in 20).

5.2.3 Representativeness

Sampling appropriate for media and analytes

All soil sampling works completed during the investigation were conducted in accordance with JBS&G standard operating procedures. Soil bore (push tubes) holes were advanced for the purposes of visual inspection of fill conditions and the collection of soil samples and considered appropriate for potential contaminants of concern identified in JBS&G (2015a).

All samples were collected wearing a new pair of disposable nitrile gloves. Where possible, disturbance of the sample was minimised during placement within the laboratory supplied sample container and during shipment.

Holding Times

Copies of Sample Receipt Notes are included in **Attachment 5**. All soil analyses were undertaken within holding times.

Rinsate Blank

One rinsate blank was submitted with the soil samples collected during the assessment. There were no reported concentrations of contaminant compounds above the laboratory LOR.

Trip Spike

One trip spike was submitted with the soil samples collected during the assessment. Trip spike recoveries were within the JBS&G acceptable limit of 70-130%.

Storage Blank

One storage blank was submitted with the soil samples collected during the assessment. There were no reported concentrations of BTEX compounds above the laboratory LOR.

Decontamination Comparability

All reusable field equipment was decontaminated between sampling locations.

Experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods.

Field works and sampling were undertaken by the same JBS&G field scientists throughout the works.

The laboratory LORs are consistent and are considered appropriate.

5.2.4 Comparability

Eurofin, the primary laboratory, and Envirolab, the secondary laboratory were NATA accredited for all analytical methods used with the exception of the column leach methodology. It is noted however, the laboratory was NATA accredited for the analysis of obtain leach fluid samples.

The laboratories used similar analytical methods and the analytical data were comparable between laboratories as indicated by the results of duplicate analysis. Where different LORs were adopted by

the laboratories, the primary laboratory typically had a lower LOR than the secondary laboratory, and as such, consideration of the data set was not impacted.

Furthermore, the samples collected for assessment purposes are considered comparable as all samples were collected by experienced JBS&G personnel in accordance with standard JBS&G sampling methods.

5.2.5 Completeness

Documentation

All laboratory documentation is complete and correct. Chain of custody documentation is provided with laboratory reports in **Attachment 5**.

Frequency for QC Samples

The frequency of analysis of all QC samples was considered appropriate and valid.

5.2.6 QA/QC Assessment

The field sampling and handling procedures produced QA/QC results which indicate that the soil data are of an acceptable quality and suitable for use in the ERA.

The NATA certified laboratory results sheets indicate that the project laboratory was generally achieving levels of performance within its recommended control limits during the period when the samples from this program were analysed.

On the basis of the results of the field and laboratory QA/QC program, the soil data is of an acceptable quality upon which to draw conclusions.

6. Results

6.1 Field Parameters and Observations

Fill materials ranged in depth from 0.4 m bgs (BH14 on shale bedrock) to 4.3 m bgs (BH17 on silty clay soil), with fill conditions typically 3.0 m to 4.0 m bgs within the northern Lot 12 extent and 1.0 m to 2.0 m bgs within the southern Lot 12 extent. A number of sample locations terminated in fill (refusal on sub-surface structures, slabs) within the south eastern Lot 12 extent, where fill conditions have historically been reported to be skeletal (<1.0 m) in nature.

Lot 12 was largely sealed with asphaltic pavements, underlain by fill comprising gravelly (blue metal) grey/brown silt sands, and in turn, brown/black silty sands with trace level inclusions of slag, glass, concrete, tiles and other build materials. No staining, chemical odours, ACM or other potential indicators of contamination were observed. Detailed field logs are provided in **Attachment 3**.

Natural silty clay soils were typically encountered underlying fill materials. Shale bedrock was identified to underlie fill materials at sample location BH14 and silty clay/sandy clay soils at a number of sample locations.

Peat (organic rich silty clay) soils were reported at sample locations BH04 and BH07 underlying fill materials and overlying natural silty clay/sandy clay soils.

Natural soils did not contain physical properties consistent with PASS/ASS.

6.2 Soil Analytical Results

Soil and soil leachate analytical results are summarised **Attachment 6**. Detailed laboratory reports are provided in **Attachment 5**. Sampling locations are shown on **Figure 5 (Attachment 2)**.

7. Conclusion

The sampling procedures utilised for the investigation are considered appropriate for the chemical constituents analysed. The field and laboratory QA / QC program indicates that the data obtained from the sampling and analysis can be considered appropriately accurate for the objectives of the assessment – that is, the results of the investigation are considered reliable to assist in the preparation of an ERA for the site.

Natural soils within Lot 12 were not identified to contain ASS/PASS properties. As such, management of ASS/PASS is not required with respect to the proposed borrow pit/retention beneath the future Lot 12 building.

8. Recommendations

It is recommended that the data is included in the ERA assessment in accordance with the QA/QC discussion provided in this report.

Should you require clarification, please contact the undersigned on 02 8245 0300 or by email ncussen@jbsg.com.au.

Yours sincerely:



Nathan Cussen
Senior Consultant
JBS&G Australia Pty Ltd

Reviewed/Approved by:



Andrew Lau
Principal, Contaminated Land
JBS&G Australia Pty Ltd

Attachments:

- 1) Limitations
- 2) Figures
- 3) Field Logs
- 4) Tabulated QA/QC Data
- 5) Laboratory Certificates of Analysis

Attachment 1 – Limitations

This report has been prepared for use by the client 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.

JBS&G 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 JBS&G, and should not be relied upon by other parties, who should make their own enquires.

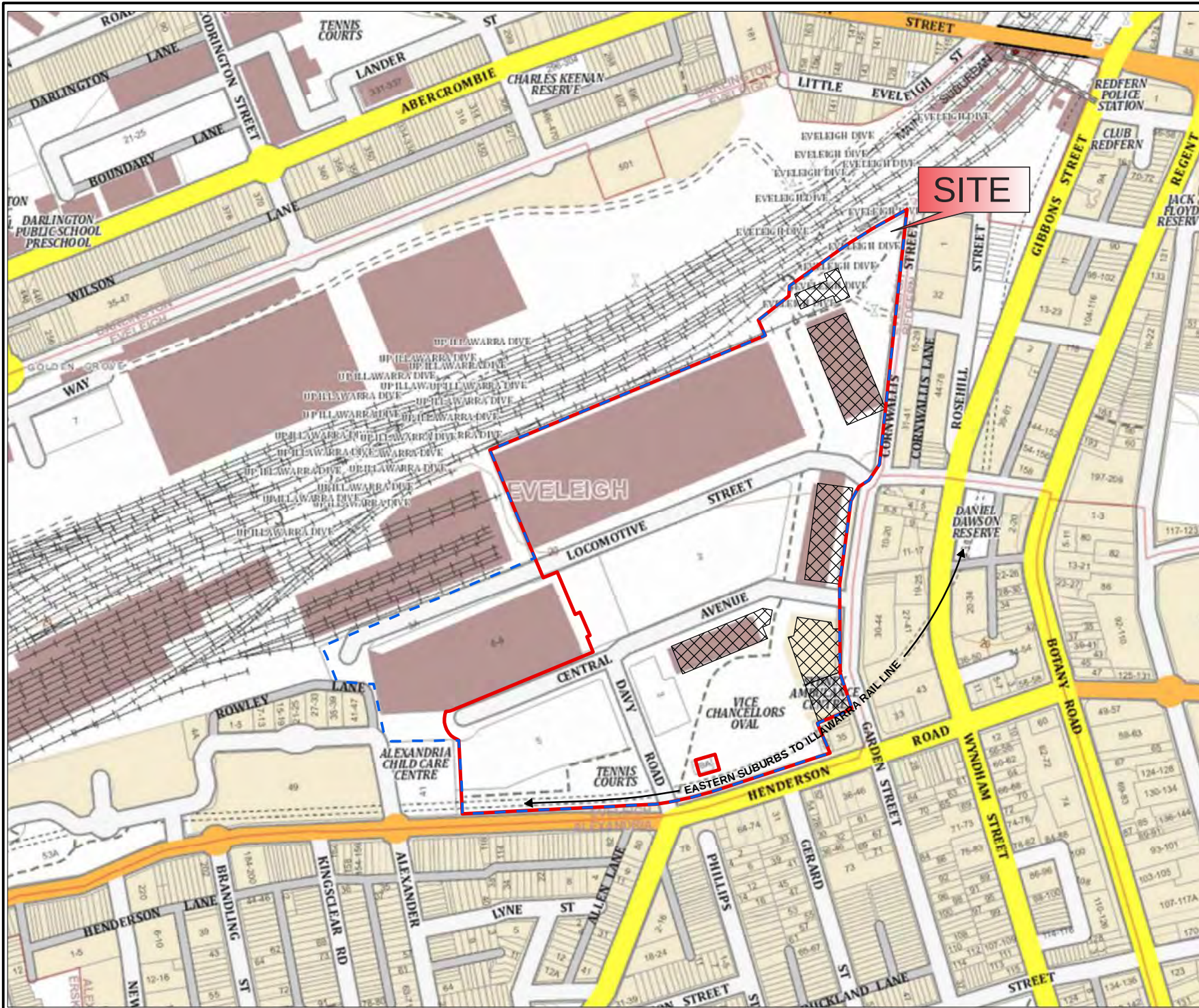
Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the 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, JBS&G reserves the right to review the report in the context of the additional information.

Attachment 2 – Figures



- Legend:**
- └─┐ Approximate Boundary - ATP Precinct
 - └─┐ Approximate Boundary - The Site
 - Existing Building Footprint Excluded from "The Site"



Client: Mirvac

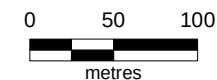
Version: R05 Rev B

Date: 27-May-2016

Drawn By: RF

Checked By: NC

Scale 1:4,500



Coor. Sys. GDA 1994 MGA Zone 56

**Australia Technology Park
Eveleigh, NSW**

SITE LOCATION

FIGURE 1:



Legend:

- Approximate Boundary - ATP Precinct
- Approximate Boundary - The Site
- Cadastral Boundaries
- Existing Building Footprint Excluded from "The Site"
- UST (Inferred Historical Location)



Client: Mirvac

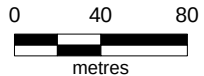
Version: R05 Rev B

Date: 27-May-2016

Drawn By: RF

Checked By: NC

Scale 1:3,500



Coor. Sys. GDA 1994 MGA Zone 56

**Australia Technology Park
Eveleigh, NSW**

SITE LAYOUT

FIGURE 2:

ID	Easting	Northing
1	333302.989	6248006.382
2	333293.067	6247933.754
3	333293.439	6247856.397
4	333303.771	6247825.047
5	333273.907	6247812.619
6	333284.633	6247786.774
7	333132.920	6247742.202
8	332964.732	6247733.630
9	332961.638	6247797.811
10	332950.268	6247822.948
11	333078.318	6247874.821
12	333047.076	6247944.192
13	333035.035	6247939.195
14	332988.564	6248050.651
15	333228.276	6248150.135
16	333222.423	6248163.545
17	333249.014	6248184.579
18	333249.411	6248193.311
19	333351.804	6248259.986
20	333327.992	6248038.132
21	333318.864	6248024.242
22	333309.736	6248018.685



Legend:

- Approximate Boundary - ATP
- Cadastral Boundaries
- Approximate Boundary - The Site
- Existing Building Footprint Excluded from "The Site"
- Lot and DP Boundaries
 - Lot 8 DP1136859
 - Lot 9 DP1136859
 - Lot 10 DP1136859
 - Lot 12 DP1136859
 - Lot 13 DP1136859
- Site Coordinate Location



Client: Mirvac

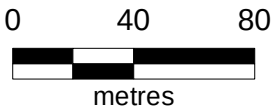
Version: R05 Rev A

Date: 27-May-2016

Drawn By: RF

Checked By: NC

Scale 1:2,500



Coor. Sys. GDA 1994 MGA Zone 56

Australia Technology Park
Eveleigh, NSW

CADASTRE - LOT AND DP
LOCATION

FIGURE 3:



Legend:

Approximate Site Boundary

Borrow Pit Locations

BP1 - Excavation RL 10m AHD

BP2 - Excavation RL 9m AHD

BP3 - Excavation RL 11m AHD



Client: Mirvac

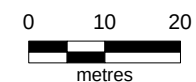
Version: R05 Rev B

Date: 27-May-2016

Drawn By: RF

Checked By: NC

Scale 1:1,000

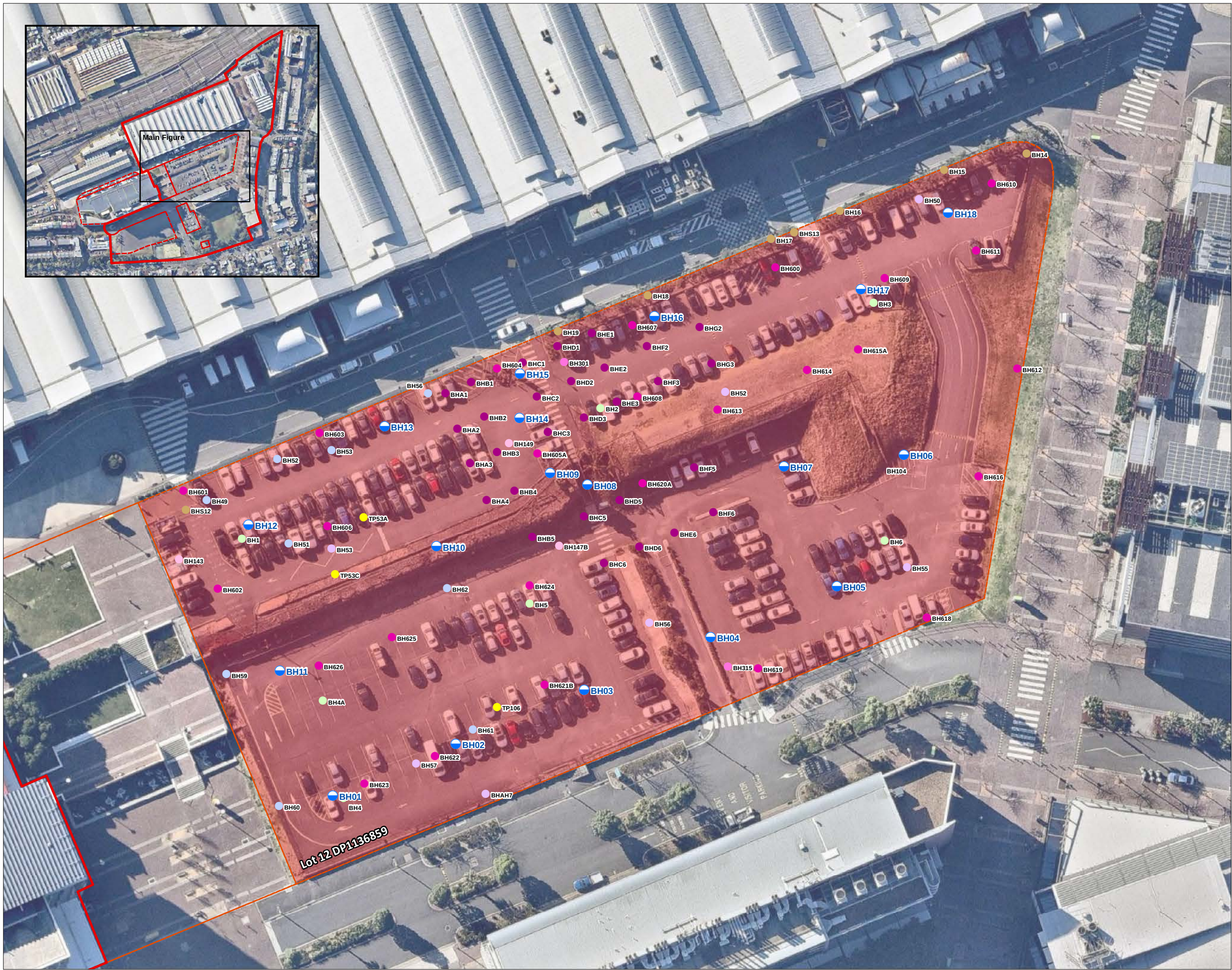


Coor. Sys. GDA 1994 MGA Zone 56

Lot 12 DP 1136859
Australia Technology Park
2 lines

LOT 12 EXCAVATION
EXTENT / LAYOUT

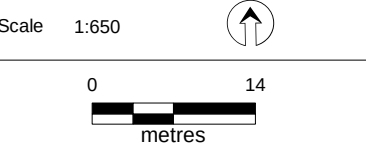
FIGURE 4:



- Legend:**
- Sample Locations JBS&G 2016
 - Historical Soil Sample Locations**
 - CMP&F 1993 (ES 2014e) - Lot 12
 - CMPS&F 1994 (ES 2014c) - Lot 12
 - DP 2003 (ES 2014c) - Lot 12
 - DP 2005a - Lot 12
 - DP 2008 (ES 2014c) - Lot 12
 - DP 2009 (ES 2014c) - Lot 12
 - ES 2014 (ES 2014c) - Lot 12
 - GETEX 2013 (ES 2014c) - Lot 12
 - HLA 2001 (ES 2014c) - Lot 12
 - JET 1993 (ES 2014c) - Lot 12
 - Approximate Boundary - ATP Site
 - Approximate Boundary - The Site
 - Cadastral Boundaries



Job No: 51142
Client: Mirvac
Version: R05 Rev B Date: 27-May-2016
Drawn By: RF Checked By: NC



Coord. Sys. GDA 1994 MGA Zone 56
**Australia Technology Park
Eveleigh, NSW**
**HISTORIC AND CURRENT
SOIL SAMPLE LOCATIONS LOT 12**

FIGURE 5:

Attachment 3 – Field Logs

**Borehole No: BH01****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 5/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 2.3****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Gravelly, silty sand / grey - brown / heterogeneous / dry / poorly graded / coarse grained / with inclusions of slag and igneous gravels	BH01 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Silty sand / black / heterogeneous / dry / coarse grained / loose / inclusions of clay clasts, glass concrete, tiles and slag	BH01 1.0-2.0	0	U	
2.0						
		End of Hole Refusal at 2.3 mbgs - concrete slab				
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH02****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 5/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 1.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Gravelly silty sand / grey - brown / heterogeneous / dry / coarse grained / loose / poorly sorted / no inclusions	BH02 0-1.0	0	U	No odours, staining or asbestos observed
1.0		FILL Silty sand / black / heterogeneous / dry / loose / poorly sorted / coarse sand and silts / inclusions of igneous, roadbase gravels and slag				
		End of Hole Refusal at 1.0 mbgs - concrete slab				
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

<i>Drilling Method Pushtube</i>	<i>Sample Type Undisturbed</i>	<i>Reference Level</i>	<i>Log Details</i>
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH03****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 5/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 1.5****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Sandy gravel / grey - brown / heterogeneous / dry / loose / coarse gravel / poorly sorted / no inclusions	BH03 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Silty sand / black / heterogeneous / dry / loose / coarse sand and silts / inclusions of igneous and asphaltic gravels, concrete, wood and slag	BH03 1.0-1.5	0	U	
		FILL Clayey sand / orange and yellow / heterogeneous / dry / coarse sand / poorly sorted / inclusions of crushed bricks				
		End of Hole Refusal at 1.5 mbgs - concrete slab				
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

<i>Drilling Method Pushtube</i>	<i>Sample Type Undisturbed</i>	<i>Reference Level</i>	<i>Log Details</i>
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information



Borehole No: BH04

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 5/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 6.5

Easting (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Sandy gravel / grey - brown / heterogeneous / dry / coarse grained / loose / poorly sorted / no inclusions	BH04 0-1.0	0.6	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Sand / yellow and brown / heterogeneous / dry / coarse grain / inclusions of igneous gravel and slag				
		Silty Clay Black / heterogeneous / damp / firm / moderate plasticity / inclusions of plant matter	BH04 1.0-2.0	6.7	U	Black silty clay material emitted organic odour
2.0		Silty Clay Clay / orange with grey mottles / heterogeneous / stiff / non plastic / damp / no inclusions				
			BH04 2.0-4.0	1.0	U	No odours, staining or asbestos observed within the remainder of the natural profile
3.0						
4.0			BH04 4.0-5.0	0	U	
5.0			BH04 5.0-5.5	0	U	
		Shale Shale bedrock / grey / hard		0	U	
6.0			BH04 5.5-6.5			
		End of Hole Refusal at 6.5 mbgs - program depth				
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH05****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 5/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 4.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Gravelly, silty sand / grey - brown / heterogeneous / dry / loose / coarse grained / poorly sorted / no inclusions	BH05 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Silty sand / black / heterogeneous / dry / coarse grain / loose / poorly graded / inclusions of igneous and asphaltic gravels, concrete, wood and slag	BH05 1.0-2.0	0	U	
2.0		FILL Sand / black and grey / heterogeneous / dry / coarse grain / loose / poorly sorted / no inclusions	BH05 2.0-3.0	0	U	
3.0		Clay Clay / orange with grey mottling / low plasticity / stiff / no inclusions	BH05 3.5-4.0	0	U	
4.0		End of Hole End of hole@ 4.0 - program depth				
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information



Borehole No: BH06

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 5/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 0.5

Eastings (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Gravelly, silty sand / grey - brown / heterogeneous / dry / coarse grain / loose / poorly sorted / coarse gravel / no inclusions	BH06 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
		FILL Silty sand / black / heterogeneous / dry / coarse grain / loose / poorly sorted / inclusions of igneous gravels, concrete and slag				
		End of Hole End of hole@ 0.5 - encountered service				
1.0						
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information



Borehole No: BH07

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 5/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 4.0

Eastings (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Gravelly, silty sand / grey - brown / heterogeneous / dry / loose / coarse grain / poorly sorted / no inclusions	BH07 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Sand / grey / heterogeneous / moist / coarse grain / loose / poor grade / inclusions of slag				
		Silty clay Sandy, silty clay / black and orange / heterogeneous / damp / high plasticity / soft / no inclusions	BH07 1.0-1.5	0	U	
		Grades to black silty clay				
2.0		Clay Clay / orange with white mottling				
			BH07 2.0-3.0	0	U	
3.0						
			BH07 3.0-4.0	0	U	
4.0		End of Hole End of hole@ 4.0 - program				
5.0						
6.0						
7.0						
8.0						

<i>Drilling Method Pushtube</i>	<i>Sample Type Undisturbed</i>	<i>Reference Level</i>	<i>Log Details</i>
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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**Borehole No: BH08****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 3.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly, silty sand / brown / heterogeneous / dry / with inclusions of sandstone, igneous gravel, rootlets, other organic matter and slag	BH08 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
		FILL As above with fewer organic matter inclusions				
1.0			BH08 1.0-2	0	U	
2.0						
		Clayey Sand Clayey sand / cream, red and grey / mottled / damp / homogeneous / highly plastic	BH08 2.5-3.0	0	U	
3.0		End of Hole End of hole@ 3.0 - program				
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH09****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 8****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				No odours, staining or asbestos observed
		FILL Gravelly silty sand / brown, black and red / heterogeneous / dry / with inclusions of high quantity of asphaltic gravels, some charcoal, slag and sandstone	BH09 0-1.0	0	U	
1.0		FILL Silty sand / gold and brown / homogeneous / damp / no inclusions	BH09 1-2	0	U	
2.0			BH09 2-3	0	U	
3.0		Clayey Sand Clayey sand / brown / heterogeneous / damp / poor grade / coarse grai	BH09 3-4	0	U	
4.0						
5.0						
6.0		Clay Clay / red with grey mottling / highly plastic / mottled	BH09 6-6.5	0	U	
7.0						
8.0		Shale Shale bedrock / hard / grey	BH09 8	0	U	
		End of Hole End of hole @ 8.0 - program				

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: BH10

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 6/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 1.3

Eastings (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of high quantity of asphaltic gravels, some charcoal, sandstone and slag	BH10 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0						
		End of Hole End of hole@ 1.3 - refusal on concrete. - moved location 0.5 m west, same result, abandoned				
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: BH11

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 5/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Auger

Total Hole Depth (mbgs): 0.5

Eastings (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		Asphalt Pavement				
		FILL Concrete				No odours, staining or asbestos observed within the fill profile
		End of Hole End of hole@ 0.5 - Refusal				
1.0						
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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**Borehole No: BH12****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 5/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 7.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				No odours, staining or asbestos observed within the fill profile
		Concrete Concrete				
		FILL Silty sand / black / heterogeneous / dry / coarse grained / poorly sorted / with inclusions of clay clasts, concrete fragments, igneous gravels and slag	BH12 0-1.0	0	U	
1.0		FILL Reworked clay and sand / yellow to orange / heterogeneous / damp / coarse grained / poorly sorted / with clay clasts (yellow and black) / no anthropogenic inclusions	BH12 1-2	0	U	
2.0			BH12 2-3	0	U	
3.0			BH12 3-4	0	U	
4.0			BH12 4-5	0	U	
5.0		Clay Clay / orange with grey mottling / moist / firm to stiff / plastic / no inclusions	BH12 5-6	0	U	
6.0						
			BH12 6.5-7	0	U	
7.0		End of Hole End of hole @ 7.0 - program				
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Rohan Hammond
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: BH13

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 6/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 3.5

Easting (MGA): 0

Northing (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				No odours, staining or asbestos observed
			BH13 0-1.0	0	U	
1.0		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of high quantity of asphaltic gravel, some charcoal, sandstone and slag	BH13 1-2	0	U	
2.0						
3.0						
		Clay Silty clay / brown with grey mottling stiff / low plasticity / mottled	BH13 3-3.5	0	U	
		End of Hole End of hole @ 3.5 - program				
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information



Borehole No: BH14

Project No: 51142

Client: Mirvac Projects Pty Ltd

Project Name: ATP Data Gap Investigation

Site Address: Lot 12 ATP

Date: 6/12/2015

Contractor: Matrix Drilling

Drill Rig: Geoprobe

Method: Pushtube

Total Hole Depth (mbgs): 1.0

Eastings (MGA): 0

Northings (MGA): 0

Reference Level: Ground Surface

Elevation - Surface (m): 0

Bore Diameter (mm): 100

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and / heterogeneous / with inclusions of asphaltic gravels, some charcoal, sandstone, igneous gravels and slag Shale Shale bedrock / grey / hard	BH14 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		End of Hole End of hole @ 1.0 - program				
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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**Borehole No: BH15****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 3.6****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of asphaltic gravels, some charcoal, sandstone, igneous gravels and slag	BH15 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0			BH15 1-2	0	U	
2.0			BH15 2-3	0	U	
3.0			BH15 3-3.6	0	U	
		Silty Clay Silty clay / red and cream / some inclusions of sandy bands				
		End of Hole End of hole @ 3.6 - program				
4.0						
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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**Borehole No: BH16****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 4.5****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of asphaltic gravels, some charcoal, sandstone, igneous gravels and slag	BH16 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL Clayey sand / light brown / inclusions of slag	BH16 1-2	0	U	
2.0			BH16 2-3	0	U	
3.0		Silty Sand Silty sand / brown and yellow / homogeneous / damp / no inclusions	BH16 3-4	0	U	
4.0		Silty Clay Silty clay / red, grey and cream / mottled	BH16 4-4.5	0	U	
		End of Hole End of hole @ 4.5 - program				
5.0						
6.0						
7.0						
8.0						

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH17****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 8.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of asphaltic gravels, some charcoal, sandstone, igneous gravels and slag	BH17 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0		FILL As above, increase in sand / gold / damp / heterogeneous	BH17 1-2	0	U	
2.0			BH17 2-3	0	U	
3.0		FILL Reworked Natural				
4.0						
5.0		Silty Clay Silty clay / red, grey and cream / homogenous / highly plastic / no inclusions - some red (Fe rich) litho-clasts (handed)	BH17 4-5	0	U	
6.0						
7.0			BH17 6-7	0	U	
8.0		Shale Shale bedrock / hard / grey				
		End of Hole End of hole @ 8.0 - program				

Drilling Method Pushtube	Sample Type Undisturbed	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

**Borehole No: BH18****Project No: 51142****Client: Mirvac Projects Pty Ltd****Project Name: ATP Data Gap Investigation****Site Address: Lot 12 ATP****Date: 6/12/2015****Contractor: Matrix Drilling****Drill Rig: Geoprobe****Method: Pushtube****Total Hole Depth (mbgs): 4.0****Eastings (MGA): 0****Northings (MGA): 0****Reference Level: Ground Surface****Elevation - Surface (m): 0****Bore Diameter (mm): 100**

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL Gravelly silty sand / brown, black and red / heterogeneous / with inclusions of asphaltic gravels, some charcoal, sandstone, igneous gravels and slag	BH18 0-1.0	0	U	No odours, staining or asbestos observed within the fill profile
1.0			BH18 1-2	0	U	
2.0		FILL Reworked natural - silty clay / red and grey / some charcoal inclusions	BH18 2-3	0	U	
3.0		Silty Clay Silty clay / red with grey mottling	BH18 3-4	0	U	
4.0		End of Hole End of hole @ 4.0 - program				
5.0						
6.0						
7.0						
8.0						

<i>Drilling Method Pushtube</i>	<i>Sample Type Undisturbed</i>	<i>Reference Level</i>	<i>Log Details</i>
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Daniel Danero
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Nathan Cussen
HFA - Hollow Flight Auger	CS - Core sample		
PT - Push Tube			
AH - Air Hammer			

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information

Attachment 4 – Tabulated QA/QC Data

Field Duplicates (SOIL)				SDG	482392	482392		482392	482392		482392	482392		482392	Interlab_D		482392	Interlab_D		482392	Interlab_D	
Filter: ALL				Field ID	BH05 3.5-4.0	QC01	RPD	BH07 3.0-4.0	QC02	RPD	BH12 6.5-7.0	QC03	RPD	BH05 3.5-4.0	QC01A	RPD	BH07 3.0-4.0	QC02A	RPD	BH12 6.5-7.0	QC03A	RPD
				Sampled Date/Time	06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15	
Filter	Chem_Grd	ChemNam	Units	EQL																		
Metals & M	Metals & M	Arsenic (T)	mg/kg	2 (Primary): 4 (Interlab)	8.2	9.5	15	3.6	54.0	175	3.6	<2.0	57	8.2	4.0	69	3.6	11.0	101	3.6	17.0	130
Metals & M		Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
Metals & M		Chromium	mg/kg	5 (Primary): 1 (Interlab)	13.0	32.0	84	13.0	19.0	38	6.0	<5.0	18	13.0	9.0	36	13.0	5.0	89	6.0	8.0	29
Metals & M		Copper	mg/kg	5 (Primary): 1 (Interlab)	530.0	<5.0	196	7.7	6.5	17	<5.0	<5.0	0	530.0	2.0	198	7.7	3.0	88	<5.0	3.0	0
Metals & M		Lead	mg/kg	5 (Primary): 1 (Interlab)	150.0	6.6	183	20.0	<5.0	120	<5.0	<5.0	0	150.0	10.0	175	20.0	9.0	76	<5.0	8.0	46
Metals & M		Mercury (I)	mg/kg	0.05 (Primary): 0.1 (Interlab)	0.06	<0.05	18	<0.05	<0.05	0	<0.05	<0.05	0	0.06	<0.1	0	<0.05	<0.1	0	<0.05	<0.1	0
Metals & M		Nickel	mg/kg	5 (Primary): 1 (Interlab)	16.0	<5.0	105	<5.0	<5.0	0	<5.0	<5.0	0	16.0	<1.0	176	<5.0	<1.0	0	<5.0	<1.0	0
Metals & M		Zinc	mg/kg	5 (Primary): 1 (Interlab)	220.0	<5.0	191	<5.0	<5.0	0	<5.0	<5.0	0	220.0	<1.0	198	<5.0	<1.0	0	<5.0	<1.0	0
Metals & Metalloids																						
Chlorinated	Chlorinated	1,1,1,2-tetr	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,1,1-trichl	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,1,2-trichl	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,1,2,2-tetr	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,1-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,2,3-trichl	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,2-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,2-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,3-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Bromochlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Bromodichl	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Carbon tetr	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Chloroetha	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Chloroform	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Chlorometh	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		di bromochl	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Dichlorodif	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Dichlorom	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0				<0.5			<0.5					
Chlorinated		Trichloroflu	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated Alkanes																						
Chlorinated	Chlorinated	1,1,2,2-tetr	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		1,1-Dichlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		3-chloropr	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0				<0.05			<0.05					
Chlorinated		4-chloroto	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		cis-1,2-dic	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		cis-1,3-dic	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		trans-1,2-d	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		trans-1,3-d	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Trichloroet	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated		Vinyl Chlor	mg/kg	0.5 (Primary): 1 (Interlab)	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<1.0	0	<0.5	<1.0	0			
Chlorinated Alkenes																						
TPHs (NEP	TPHs (NEP	C6-C9 Fra	mg/kg	20 (Primary): 25 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<25.0	0	<20.0	<25.0	0	<20.0	<25.0	0
TPHs (NEP		C10-C14 F	mg/kg	20 (Primary): 50 (Interlab)	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<50.0	0	<20.0	<50.0	0	<20.0	<50.0	0
TPHs (NEP		C15-C28 F	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	<100.0	0
TPHs (NEP		C29-C36 F	mg/kg	50 (Primary): 100 (Interlab)	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	<100.0	0
TPHs (NEP		C10-C36 F	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0			<50.0			<50.0		
TPHs (NEPC 1999)																						
TRHs (NEP	TRHs (NEP	>C10-C16	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<					

Field Duplicates (SOIL) Filter: ALL			SDG	482392	482392		482392	482392		482392	482392		482392	Interlab_D		482392	Interlab_D		482392	Interlab_D	
			Field ID	BH05 3.5-4.0	QC01	RPD	BH07 3.0-4.0	QC02	RPD	BH12 6.5-7.0	QC03	RPD	BH05 3.5-4.0	QC01A	RPD	BH07 3.0-4.0	QC02A	RPD	BH12 6.5-7.0	QC03A	RPD
			Sampled Date/Time	06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15		06-12-15	06-12-15	
Polycyclic		PAHs (Total)	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Polycyclic	Aromatic Hydrocarbons																				
Monocyclic	Monocyclic	1,2,4-trime	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Monocyclic		1,3,5-trime	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Monocyclic		Bromobenz	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Monocyclic		Isopropylben	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Monocyclic		Styrene	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Monocyclic	Aromatic Hydrocarbons																				
Miscellaneous	Miscellaneous	1,2-dibrom	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Miscellaneous		2-Butanone	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0		<0.5			<0.5				
Miscellaneous		4-Methyl-2	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0		<0.5			<0.5				
Miscellaneous		Bromoform	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Miscellaneous		Bromomet	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Miscellaneous		Dibromom	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Miscellaneous		Iodometha	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0		<0.5			<0.5				
Miscellaneous Hydrocarbons																					
Chlorinated	Chlorinated	Chlorobenz	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Chlorinated		1,2-Dichlor	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Chlorinated		1,3-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Chlorinated		1,4-dichlor	mg/kg	0.5 (Primary): 1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<1.0	0	<0.5	<1.0	0		
Chlorinated		Hexachlor	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Chlorinated Benzenes																					
Polychlorinated	Polychlorinated	Aroclor 101	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		Aroclor 123	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		Aroclor 124	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		Aroclor 124	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		Aroclor 124	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		Aroclor 124	mg/kg	0.5 (Primary): 0.1 (Interlab)			<0.5	<0.5	0	<0.5	<0.5	0		<0.5	<0.1	0	<0.5	<0.1	0		
Polychlorinated		PCBs (Total)	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0		<0.5			<0.5				
Polychlorinated Biphenyls																					
Organic Sulfur	Organic Sulfur	Carbon dis	mg/kg	0.5			<0.5	<0.5	0	<0.5	<0.5	0		<0.5			<0.5				
Organic Sulfur Compounds																					
Organochlorine	Organochlorine	Aldrin	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Dieldrin	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		DDD	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		4,4-DDE	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		DDT	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		alpha-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		beta-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		delta-BHC	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Chlordane	mg/kg	0.1			<0.1	<0.1	0	<0.1	<0.1	0		<0.1			<0.1				
Organochlorine		Endosulfar	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Endosulfar	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Endosulfar	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Endrin	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Endrin alde	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Endrin ket	mg/kg	0.05			<0.05	<0.05	0	<0.05	<0.05	0		<0.05			<0.05				
Organochlorine		Heptachlor	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Heptachlor	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Lindane	mg/kg	0.05 (Primary): 0.1 (Interlab)			<0.05	<0.05	0	<0.05	<0.05	0		<0.05	<0.1	0	<0.05	<0.1	0		
Organochlorine		Methoxych	mg/kg	0.2 (Primary): 0.1 (Interlab)			<0.2	<0.2	0	<0.2	<0.2	0		<0.2	<0.1	0	<0.2	<0.1	0		
Organochlorine		Toxaphene	mg/kg	1			<1.0	<1.0	0	<1.0	<1.0	0		<1.0			<1.0				
Organochlorine Pesticides																					
Asbestos	Asbestos	Approx. Sa	G				55.0	24.0	78	37.0	24.0	43				55.0			37.0		
Asbestos		Mass ACM	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Asbestos f	%w/w				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass Asbe	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass FA	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass Asbe	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass AF	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass Asbe	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Asbestos f	%w/w				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos		Mass Asbe	G				0.0	0.0	0	0.0	0.0	0				0.0			0.0		
Asbestos -	Asbestos -	ACM - Con	COMMENT				1.0	1.0	0	1.0	1.0	0				1.0			1.0		
Asbestos -		AF - Comm	COMMENT				1.0	1.0	0	1.0	1.0	0									

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on

ESDAT QA Checker
Project:Burrow Pit ATP
Filter: ALL

Overview Summary

[Count of Samples](#)

[Count of Results](#)

Holding Times

Holding Time Errors (0)

Blanks

[Field Blanks](#)

Detects in Lab Blanks (0)

SDG's without Storage Blanks (0)

SDG's without Method Blanks (0)

Duplicates

[Field and Interlab Duplicates](#)

Lab Duplicates with high RPDs (0)

Duplicate Samples with incorrect or missing Parent Samples (0)

Samples at the same Location/Depth/Time not specified as duplicates (0)

Surrogates

[Surrogate Variation > 30% or outside lab LCL or UCL \(10\)](#)

Lab Control Samples

SDG's without a Laboratory Control Sample (0)

Laboratory Control Samples, Error > 30% (0)

Certified and Standard Reference Materials

Certified Reference Materials - Error > 30% (0)

Matrix Spikes

SDG's without a Matrix Spike (0)

Trip Spikes with invalid Control Sample (0)

[Less than 1 matrix spike in 20 samples, or less than 1 matrix duplicate in 20 samples \(2\)](#)

Matrix Spike Recoveries less than 70% or greater than 130% or outside lab LCL or UCL (0)

[Trip Spike Recoveries \(70% - 130% is acceptable\) \(6\)](#)

[Contents](#)

Surrogate Variation > 30% or outside lab LCL or UCL

SDG	Expr1001	Lab_Report_Number	Sample_Type	Matrix_Type	SampleCode	Field_ID	Depth	Sampled_Date-Time	Compound	Recovery %
482410	482410	482410	Normal	SOIL	S15-De06706	BH01 0.0-1.0	BH01	06-12-15	2-Fluorobiphenyl (surr.)	69
482410	482410	482410	Normal	SOIL	S15-De06709	BH03 0.0-1.0	BH03	06-12-15	p-Terphenyl-d14 (surr.)	134
482410	482410	482410	Normal	SOIL	S15-De06713	BH05 0.0-0.1	BH05	06-12-15	p-Terphenyl-d14 (surr.)	135
482410	482410	482410	Normal	SOIL	S15-De06718	BH08 1.0-2.0	BH08	06-12-15	p-Terphenyl-d14 (surr.)	132
482410	482410	482410	Normal	SOIL	S15-De06720	BH09 1.0-2.0	BH09	06-12-15	2-Fluorobiphenyl (surr.)	65
482410	482410	482410	Normal	SOIL	S15-De06738	BH17 2.0-3.0	BH17	06-12-15	2-Fluorobiphenyl (surr.)	69
482927	482927	482927	Normal	SOIL	S15-De10571	BULK 1_1.0-2.0	BULK 11 - 2	06-12-15	2-Fluorobiphenyl (surr.)	50
482927	482927	482927	Normal	SOIL	S15-De10571	BULK 1_1.0-2.0	BULK 11 - 2	06-12-15	p-Terphenyl-d14 (surr.)	56
482927	482927	482927	Normal	SOIL	S15-De10572	BULK 2_0-1.0	BULK 20 - 1	06-12-15	2-Fluorobiphenyl (surr.)	51
482927	482927	482927	Normal	SOIL	S15-De10572	BULK 2_0-1.0	BULK 20 - 1	06-12-15	p-Terphenyl-d14 (surr.)	58

Attachment 5 - Laboratory Certificates of Analysis

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																
BH01 0.0-1.0	Dec 06, 2015		Soil	S15-De06582	X				X			X						X		X
BH01 1.0-2.0	Dec 06, 2015		Soil	S15-De06583					X			X						X		X
BH02 0.0-1.0	Dec 06, 2015		Soil	S15-De06584	X			X	X	X		X		X	X			X		X
BH03 0.0-1.0	Dec 06, 2015		Soil	S15-De06585	X			X	X	X		X		X	X			X		X
BH03 1.0-2.0	Dec 06, 2015		Soil	S15-De06586					X			X						X		X
BH04 0.0-1.0	Dec 06, 2015		Soil	S15-De06587	X		X	X	X	X		X		X	X			X	X	X
BH04 1.0-2.0	Dec 06, 2015		Soil	S15-De06588					X			X			X			X		X
BH04 2.0-4.0	Dec 06, 2015		Soil	S15-De06589					X			X						X		X
BH04 5.0-5.5	Dec 06, 2015		Soil	S15-De06590					X	X		X		X	X			X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794															X	X	X	X		
External Laboratory																				
BH04 5.5-6.0	Dec 06, 2015		Soil	S15-De06591					X			X				X		X		X
BH05 0.0-0.1	Dec 06, 2015		Soil	S15-De06592	X		X	X	X	X		X		X	X			X	X	X
BH05 1.0-2.1	Dec 06, 2015		Soil	S15-De06593					X			X						X		X
BH05 2.0-3.0	Dec 06, 2015		Soil	S15-De06594		X														
BH06 0.0-0.5	Dec 06, 2015		Soil	S15-De06595	X			X	X	X		X		X	X			X		X
BH07 0.0-1.0	Dec 06, 2015		Soil	S15-De06596	X		X	X	X	X		X		X	X			X	X	X
BH07 1.0-1.5	Dec 06, 2015		Soil	S15-De06597					X			X				X		X		X
BH07 2.0-3.0	Dec 06, 2015		Soil	S15-De06598												X	X			
BH08 0.0-1.0	Dec 06, 2015		Soil	S15-De06599	X			X	X	X		X		X	X			X		X
BH08 1.0-2.0	Dec 06, 2015		Soil	S15-De06600					X			X						X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH08 2.5-3.0	Dec 06, 2015		Soil	S15-De06601		X														
BH09 0.0-1.0	Dec 06, 2015		Soil	S15-De06602	X		X	X	X	X		X		X	X			X	X	X
BH09 1.0-2.0	Dec 06, 2015		Soil	S15-De06603					X			X						X		X
BH09 2.0-3.0	Dec 06, 2015		Soil	S15-De06604					X			X						X		X
BH09 3.0-4.0	Dec 06, 2015		Soil	S15-De06605			X		X			X						X	X	X
BH09 6.0-6.5	Dec 06, 2015		Soil	S15-De06606					X			X			X			X		X
BH09 8.0	Dec 06, 2015		Soil	S15-De06607												X	X			
BH10 0.0-1.0	Dec 06, 2015		Soil	S15-De06608	X			X	X	X		X		X	X			X		X
BH12 0.0-1.0	Dec 06, 2015		Soil	S15-De06609	X		X	X	X	X		X		X	X			X	X	X
BH12 1.0-2.0	Dec 06, 2015		Soil	S15-De06610					X			X						X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH12 2.0-3.0	Dec 06, 2015		Soil	S15-De06611					X			X						X		X
BH12 3.0-4.0	Dec 06, 2015		Soil	S15-De06612					X			X						X		X
BH12 4.0-5.0	Dec 06, 2015		Soil	S15-De06613			X		X			X						X	X	X
BH12 5.0-6.0	Dec 06, 2015		Soil	S15-De06614		X														
BH13 0.0-1.0	Dec 06, 2015		Soil	S15-De06615	X		X	X	X	X		X		X	X			X	X	X
BH13 1.0-2.0	Dec 06, 2015		Soil	S15-De06616	X				X			X						X		X
BH13 3.0-3.5	Dec 06, 2015		Soil	S15-De06617		X														
BH14 0.3-1.0	Dec 06, 2015		Soil	S15-De06618	X			X	X	X		X		X	X			X		X
BH15 0.0-1.0	Dec 06, 2015		Soil	S15-De06619					X	X		X		X				X		X
BH15 1.0-2.0	Dec 06, 2015		Soil	S15-De06620					X			X						X		X

Received: Dec 7, 2015 4:42 PM
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Sample Detail

[illegible]

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH17 6.0	Dec 06, 2015		Soil	S15-De06631		X														
BH18 0.0-1.0	Dec 06, 2015		Soil	S15-De06632	X			X	X	X		X		X	X			X		X
BH18 1.0-2.0	Dec 06, 2015		Soil	S15-De06633					X			X						X		X
BH18 2.0-3.0	Dec 06, 2015		Soil	S15-De06634					X			X						X		X
BH18 3.0-4.0	Dec 06, 2015		Soil	S15-De06635		X														
BH18 6.0	Dec 06, 2015		Soil	S15-De06636		X														
BH05 3.5-4.0	Dec 06, 2015		Soil	S15-De06637	X			X	X	X		X		X	X			X		X
BH07 3.0-4.0	Dec 06, 2015		Soil	S15-De06638	X			X	X	X		X		X	X			X		X
BH12 6.5-7.0	Dec 06, 2015		Soil	S15-De06639					X			X						X		X
QC01	Dec 06, 2015		Soil	S15-De06640	X			X	X	X	X	X			X			X		X

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																			
Melbourne Laboratory - NATA Site # 1254 & 14271								X										X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X
Brisbane Laboratory - NATA Site # 20794															X	X	X	X	
External Laboratory																			
QC02	Dec 06, 2015		Soil	S15-De06641	X			X	X	X	X	X			X			X	X
QC03	Dec 06, 2015		Soil	S15-De06642					X			X						X	X
RINSATE	Dec 06, 2015		Water	S15-De06643					X	X		X		X	X				X
TS	Dec 06, 2015		Water	S15-De06644									X						
SB	Dec 06, 2015		Water	S15-De06645									X						

Sample Receipt Advice

Company name: **JBS & G Australia (NSW & WA) P/L**

Contact name: **Nathan Cussen**

Project name: **ATP**

Project ID: **50720**

COC number: **Not provided**

Turn around time: **5 Day**

Date/Time received: **Dec 7, 2015 4:42 PM**

Eurofins | mgt reference: **482392**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
 - ☒ Sample Temperature of a random sample selected from the batch as recorded by Eurofins | mgt Sample Receipt : 1.6 degrees Celsius.
 - ☒ All samples have been received as described on the above COC.
 - ☒ COC has been completed correctly.
 - ☒ Attempt to chill was evident.
 - ☒ Appropriately preserved sample containers have been used.
 - ☒ All samples were received in good condition.
 - ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
 - ☒ Appropriate sample containers have been used.
 - ☒ Sample containers for volatile analysis received with zero headspace.
 - ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Charl Du Preez on Phone : +61 (2) 9900 8400 or by e.mail: charldupreez@eurofins.com.au

Results will be delivered electronically via e.mail to Nathan Cussen - ncussen@jbsg.com.au.

09006

CHAIN OF CUSTODY

Page 1 of 4



PROJECT NO.: 50720					LABORATORY BATCH NO.:																																																																																																																																																																																																																																																																																																																																																																																																													
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Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

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CHAIN OF CUSTODY

Page 2/04 4



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Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsvd.; C = Sodium Hydroxide Prsvd; VC = Hydrochloric Acid Prsvd Vial; VS = Sulfuric Acid Prsvd Vial; S = Sulfuric Acid Prsvd; Z = Zinc Prsvd; E = EDTA Prsvd; ST = Sterile Bottle; O = Other

IMSO Forms013 - Chain of Custody - Generic

09008

CHAIN OF CUSTODY

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PROJECT NO.: 50720						LABORATORY BATCH NO.:															
PROJECT NAME: ATP						SAMPLERS: Rn / 00															
DATE NEEDED BY: STD						QC LEVEL: NEPM (2013)															
PHONE: Sydney: 02 8245 0300 Perth: 08 9488 0100 Brisbane: 07 3112 2688																					
SEND REPORT & INVOICE TO: (1) adminnsw@jbsg.com.au; (2) ncussen@jbsg.com.au; (3) @jbsg.com.au																					
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																					
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Metals	TC	PAH	VOCs	Asbestos	OCF/PCs	TOC	PH	CEL						TYPE OF ASBESTOS ANALYSIS	NOTES:
BH15 1.0-2.0	Soil	6.12.15	P	Jar		X	X	X												x bag preme.	
BH15 2.0-3.0			P	Jar + Bag		X	X	X												If no bag please	
BH15 3.0-3.6			Z	Jar + Bag																sub sample from	
BH16 0-1.0			P	Jar		X	X	X	X	X	X									the jar	
BH16 1.0-2.0			P	Jar		X	X	X													
BH16 2.0-3.0			P	Jar		X	X	X													
BH16 4.0-4.5			Z	Jar + Bag									X	X							
BH17 0-1.0			P	Jar		X	X	X	X	X	X		X	X							
BH17 1.0-2.0			P	Jar		X	X	X													
BH17 2.0-3.0			P	Jar		X	X	X													
BH17 4.0			Z	Jar + Bag																	
BH17 6.0			Z	Jar + Bag																	
BH18 0-1.0			P	Jar		X	X	X	X	X	X										
BH18 1.0-2.0			P	Jar + Bag		X	X	X													
BH18 2.0-3.0			P	Jar + Bag		X	X	X													
BH18 3.0-4.0			Z	Jar + Bag																	
BH18 6.0			Z	Jar + Bag																	
BH05 3.5-4.0			Z	Jar		X	X	X	X	X	X										
BH07 3.0-4.0			Z	Jar		X	X	X	X	X	X										
RELINQUISHED BY:				METHOD OF SHIPMENT:				RECEIVED BY:				FOR RECEIVING LAB USE ONLY:									
NAME: ncussen DATE: 7.12.15				CONSIGNMENT NOTE NO.				NAME: SS				COOLER SEAL - Yes..... No Intact Broken									
OF: JBS&G				TRANSPORT CO.				DATE:				COOLER TEMP deg C									
NAME:				CONSIGNMENT NOTE NO.				NAME:				COOLER SEAL - Yes..... No Intact Broken									
DATE:				TRANSPORT CO.				DATE:				COOLER TEMP deg C									
OF:																					

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09009

CHAIN OF CUSTODY

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[illegible]

Certificate of Analysis

JBS & G Australia (NSW & WA) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Nathan Cussen**

Report **482392-W**
Project name ATP
Project ID 50720
Received Date Dec 07, 2015

Client Sample ID			RINSATE	TS	SB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S15-De06643	S15-De06644	S15-De06645
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	-	98%	< 0.001
Toluene	0.001	mg/L	-	96%	< 0.001
Ethylbenzene	0.001	mg/L	-	92%	< 0.001
m&p-Xylenes	0.002	mg/L	-	92%	< 0.002
o-Xylene	0.001	mg/L	-	94%	< 0.001
Xylenes - Total	0.003	mg/L	-	93%	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	99	82
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.005	mg/L	< 0.005	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TS	SB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S15-De06643	S15-De06644	S15-De06645
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit			
Volatile Organics					
Benzene	0.001	mg/L	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	-	-
Bromomethane	0.001	mg/L	< 0.001	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-
Chloroethane	0.001	mg/L	< 0.001	-	-
Chloroform	0.005	mg/L	< 0.005	-	-
Chloromethane	0.001	mg/L	< 0.001	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	-	-
Dibromomethane	0.005	mg/L	< 0.005	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	-
Methylene Chloride	0.001	mg/L	< 0.001	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	-	-
Vinyl chloride	0.001	mg/L	< 0.001	-	-
Xylenes - Total	0.003	mg/L	< 0.003	-	-
Fluorobenzene (surr.)	1	%	96	-	-
4-Bromofluorobenzene (surr.)	1	%	89	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene ^{N02}	0.01	mg/L	< 0.01	-	-
TRH C6-C10	0.02	mg/L	< 0.02	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-

Client Sample ID			RINSATE	TS	SB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S15-De06643	S15-De06644	S15-De06645
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	84	-	-
p-Terphenyl-d14 (surr.)	1	%	124	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	-	-
4,4'-DDD	0.0001	mg/L	< 0.0001	-	-
4,4'-DDE	0.0001	mg/L	< 0.0001	-	-
4,4'-DDT	0.0001	mg/L	< 0.0001	-	-
α-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
β-BHC	0.0001	mg/L	< 0.0001	-	-
δ-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
γ-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0001	mg/L	< 0.0001	-	-
Toxaphene	0.01	mg/L	< 0.01	-	-
Dibutylchloredate (surr.)	1	%	89	-	-
Polychlorinated Biphenyls (PCB)					
Aroclor-1016	0.005	mg/L	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	-	-
Total PCB*	0.001	mg/L	< 0.005	-	-
Dibutylchloredate (surr.)	1	%	89	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-

Client Sample ID			RINSATE	TS	SB
Sample Matrix			Water	Water	Water
Eurofins mgt Sample No.			S15-De06643	S15-De06644	S15-De06645
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit			
Heavy Metals					
Arsenic	0.005	mg/L	< 0.005	-	-
Cadmium	0.0005	mg/L	< 0.0005	-	-
Chromium	0.005	mg/L	< 0.005	-	-
Copper	0.005	mg/L	< 0.005	-	-
Lead	0.005	mg/L	< 0.005	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.005	mg/L	< 0.005	-	-
Zinc	0.005	mg/L	< 0.005	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: TRH C6-C36 - LTM-ORG-2010	Sydney	Dec 07, 2015	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Sydney	Dec 07, 2015	7 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: TRH C6-C40 - LTM-ORG-2010	Sydney	Dec 07, 2015	7 Day
BTEX - Method: TRH C6-C40 - LTM-ORG-2010	Sydney	Dec 07, 2015	14 Day
Volatile Organics - Method: E016 Volatile Organic Compounds (VOC)	Sydney	Dec 07, 2015	7 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 07, 2015	7 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Dec 07, 2015	7 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Dec 07, 2015	7 Day
Metals M8 - Method: LTM-MET-3040 Metals in Waters by ICP-MS	Sydney	Dec 07, 2015	28 Day

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																
BH01 0.0-1.0	Dec 06, 2015		Soil	S15-De06582	X				X			X						X		X
BH01 1.0-2.0	Dec 06, 2015		Soil	S15-De06583					X			X						X		X
BH02 0.0-1.0	Dec 06, 2015		Soil	S15-De06584	X			X	X	X		X		X	X			X		X
BH03 0.0-1.0	Dec 06, 2015		Soil	S15-De06585	X			X	X	X		X		X	X			X		X
BH03 1.0-2.0	Dec 06, 2015		Soil	S15-De06586					X			X						X		X
BH04 0.0-1.0	Dec 06, 2015		Soil	S15-De06587	X		X	X	X	X		X		X	X			X	X	X
BH04 1.0-2.0	Dec 06, 2015		Soil	S15-De06588					X			X			X			X		X
BH04 2.0-4.0	Dec 06, 2015		Soil	S15-De06589					X			X						X		X
BH04 5.0-5.5	Dec 06, 2015		Soil	S15-De06590					X	X		X		X	X			X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH04 5.5-6.0	Dec 06, 2015		Soil	S15-De06591					X			X				X		X		X
BH05 0.0-0.1	Dec 06, 2015		Soil	S15-De06592	X		X	X	X	X		X		X	X			X	X	X
BH05 1.0-2.1	Dec 06, 2015		Soil	S15-De06593					X			X						X		X
BH05 2.0-3.0	Dec 06, 2015		Soil	S15-De06594		X														
BH06 0.0-0.5	Dec 06, 2015		Soil	S15-De06595	X			X	X	X		X		X	X			X		X
BH07 0.0-1.0	Dec 06, 2015		Soil	S15-De06596	X		X	X	X	X		X		X	X			X	X	X
BH07 1.0-1.5	Dec 06, 2015		Soil	S15-De06597					X			X				X		X		X
BH07 2.0-3.0	Dec 06, 2015		Soil	S15-De06598												X	X			
BH08 0.0-1.0	Dec 06, 2015		Soil	S15-De06599	X			X	X	X		X		X	X			X		X
BH08 1.0-2.0	Dec 06, 2015		Soil	S15-De06600					X			X						X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH08 2.5-3.0	Dec 06, 2015		Soil	S15-De06601		X														
BH09 0.0-1.0	Dec 06, 2015		Soil	S15-De06602	X		X	X	X	X		X		X	X			X	X	X
BH09 1.0-2.0	Dec 06, 2015		Soil	S15-De06603					X			X						X		X
BH09 2.0-3.0	Dec 06, 2015		Soil	S15-De06604					X			X						X		X
BH09 3.0-4.0	Dec 06, 2015		Soil	S15-De06605			X		X			X						X	X	X
BH09 6.0-6.5	Dec 06, 2015		Soil	S15-De06606					X			X			X			X		X
BH09 8.0	Dec 06, 2015		Soil	S15-De06607													X	X		
BH10 0.0-1.0	Dec 06, 2015		Soil	S15-De06608	X			X	X	X		X		X	X			X		X
BH12 0.0-1.0	Dec 06, 2015		Soil	S15-De06609	X		X	X	X	X		X		X	X			X	X	X
BH12 1.0-2.0	Dec 06, 2015		Soil	S15-De06610					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH12 2.0-3.0	Dec 06, 2015		Soil	S15-De06611					X			X						X		X
BH12 3.0-4.0	Dec 06, 2015		Soil	S15-De06612					X			X						X		X
BH12 4.0-5.0	Dec 06, 2015		Soil	S15-De06613			X		X			X						X	X	X
BH12 5.0-6.0	Dec 06, 2015		Soil	S15-De06614		X														
BH13 0.0-1.0	Dec 06, 2015		Soil	S15-De06615	X		X	X	X	X		X		X	X			X	X	X
BH13 1.0-2.0	Dec 06, 2015		Soil	S15-De06616	X				X			X						X		X
BH13 3.0-3.5	Dec 06, 2015		Soil	S15-De06617		X														
BH14 0.3-1.0	Dec 06, 2015		Soil	S15-De06618	X			X	X	X		X		X	X			X		X
BH15 0.0-1.0	Dec 06, 2015		Soil	S15-De06619					X	X		X		X				X		X
BH15 1.0-2.0	Dec 06, 2015		Soil	S15-De06620					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH15 2.0-3.0	Dec 06, 2015		Soil	S15-De06621					X			X						X		X
BH15 3.0-3.6	Dec 06, 2015		Soil	S15-De06622		X														
BH16 0.0-1.0	Dec 06, 2015		Soil	S15-De06623	X			X	X	X		X		X	X			X		X
BH16 1.0-2.0	Dec 06, 2015		Soil	S15-De06624					X			X						X		X
BH16 2.0-3.0	Dec 06, 2015		Soil	S15-De06625					X			X						X		X
BH16 4.0-4.5	Dec 06, 2015		Soil	S15-De06626			X											X	X	
BH17 0.0-1.0	Dec 06, 2015		Soil	S15-De06627	X		X	X	X	X		X		X	X			X	X	X
BH17 1.0-2.0	Dec 06, 2015		Soil	S15-De06628					X			X						X		X
BH17 2.0-3.0	Dec 06, 2015		Soil	S15-De06629					X			X						X		X
BH17 4.0	Dec 06, 2015		Soil	S15-De06630		X														

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH17 6.0	Dec 06, 2015		Soil	S15-De06631		X														
BH18 0.0-1.0	Dec 06, 2015		Soil	S15-De06632	X			X	X	X		X		X	X			X		X
BH18 1.0-2.0	Dec 06, 2015		Soil	S15-De06633					X			X						X		X
BH18 2.0-3.0	Dec 06, 2015		Soil	S15-De06634					X			X						X		X
BH18 3.0-4.0	Dec 06, 2015		Soil	S15-De06635		X														
BH18 6.0	Dec 06, 2015		Soil	S15-De06636		X														
BH05 3.5-4.0	Dec 06, 2015		Soil	S15-De06637	X			X	X	X		X		X	X			X		X
BH07 3.0-4.0	Dec 06, 2015		Soil	S15-De06638	X			X	X	X		X		X	X			X		X
BH12 6.5-7.0	Dec 06, 2015		Soil	S15-De06639					X			X						X		X
QC01	Dec 06, 2015		Soil	S15-De06640	X			X	X	X	X	X			X			X		X

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Laboratory where analysis is conducted																			
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	
External Laboratory																			
QC02	Dec 06, 2015		Soil	S15-De06641	X			X	X	X	X	X			X			X	X
QC03	Dec 06, 2015		Soil	S15-De06642					X			X						X	X
RINSATE	Dec 06, 2015		Water	S15-De06643					X	X		X		X	X				X
TS	Dec 06, 2015		Water	S15-De06644									X						
SB	Dec 06, 2015		Water	S15-De06645									X						

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the Sample Receipt Advice.

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC Data General Comments

1. Where a result is reported as a 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 is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.005			0.005	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1,2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1,3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4,4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4,4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.005			0.005	Pass	
Cadmium	mg/L	< 0.0005			0.0005	Pass	
Chromium	mg/L	< 0.005			0.005	Pass	
Copper	mg/L	< 0.005			0.005	Pass	
Lead	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	94			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	100			70-130	Pass	
Toluene	%	99			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	98			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	79			70-130	Pass	
1.1-Dichloroethene	%	99			70-130	Pass	
1.1.1-Trichloroethane	%	100			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	99			70-130	Pass	
1.1.2-Trichloroethane	%	102			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	101			70-130	Pass	
1.2-Dibromoethane	%	100			70-130	Pass	
1.2-Dichlorobenzene	%	104			70-130	Pass	
1.2-Dichloroethane	%	101			70-130	Pass	
1.2-Dichloropropane	%	100			70-130	Pass	
1.2.3-Trichloropropane	%	104			70-130	Pass	
1.2.4-Trimethylbenzene	%	100			70-130	Pass	
1.3-Dichlorobenzene	%	103			70-130	Pass	
1.3-Dichloropropane	%	101			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.3.5-Trimethylbenzene	%	99			70-130	Pass	
1.4-Dichlorobenzene	%	102			70-130	Pass	
2-Butanone (MEK)	%	100			70-130	Pass	
2-Propanone (Acetone)	%	107			70-130	Pass	
4-Chlorotoluene	%	102			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	100			70-130	Pass	
Allyl chloride	%	101			75-125	Pass	
Bromobenzene	%	100			70-130	Pass	
Bromochloromethane	%	103			70-130	Pass	
Bromodichloromethane	%	101			70-130	Pass	
Bromoform	%	99			70-130	Pass	
Bromomethane	%	119			70-130	Pass	
Carbon disulfide	%	99			70-130	Pass	
Carbon Tetrachloride	%	99			70-130	Pass	
Chlorobenzene	%	99			70-130	Pass	
Chloroethane	%	85			70-130	Pass	
Chloroform	%	99			70-130	Pass	
Chloromethane	%	93			70-130	Pass	
cis-1.2-Dichloroethene	%	100			70-130	Pass	
cis-1.3-Dichloropropene	%	96			70-130	Pass	
Dibromochloromethane	%	100			70-130	Pass	
Dibromomethane	%	101			70-130	Pass	
Dichlorodifluoromethane	%	86			70-130	Pass	
Iodomethane	%	126			70-130	Pass	
Isopropyl benzene (Cumene)	%	97			70-130	Pass	
Methylene Chloride	%	105			70-130	Pass	
Styrene	%	95			70-130	Pass	
Tetrachloroethene	%	99			70-130	Pass	
trans-1.2-Dichloroethene	%	101			70-130	Pass	
trans-1.3-Dichloropropene	%	96			70-130	Pass	
Trichloroethene	%	99			70-130	Pass	
Trichlorofluoromethane	%	100			70-130	Pass	
Vinyl chloride	%	99			70-130	Pass	
Xylenes - Total	%	98			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	117			70-130	Pass	
TRH C6-C10	%	103			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	98			70-130	Pass	
Benz(a)anthracene	%	113			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	117			70-130	Pass	
Benzo(g,h,i)perylene	%	99			70-130	Pass	
Benzo(k)fluoranthene	%	103			70-130	Pass	
Chrysene	%	95			70-130	Pass	
Dibenz(a,h)anthracene	%	106			70-130	Pass	
Fluoranthene	%	103			70-130	Pass	
Fluorene	%	95			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	107			70-130	Pass	
Naphthalene	%	96			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene			%	100			70-130	Pass	
Pyrene			%	100			70-130	Pass	
LCS - % Recovery									
Organochlorine Pesticides									
4,4'-DDD			%	94			70-130	Pass	
4,4'-DDE			%	102			70-130	Pass	
4,4'-DDT			%	91			70-130	Pass	
a-BHC			%	79			70-130	Pass	
Aldrin			%	83			70-130	Pass	
b-BHC			%	92			70-130	Pass	
Dieldrin			%	108			70-130	Pass	
Endosulfan I			%	103			70-130	Pass	
Endosulfan II			%	112			70-130	Pass	
Endosulfan sulphate			%	80			70-130	Pass	
Endrin			%	103			70-130	Pass	
Endrin aldehyde			%	108			70-130	Pass	
Endrin ketone			%	103			70-130	Pass	
g-BHC (Lindane)			%	81			70-130	Pass	
Heptachlor			%	85			70-130	Pass	
Heptachlor epoxide			%	99			70-130	Pass	
Methoxychlor			%	83			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16			%	76			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	86			70-130	Pass	
Cadmium			%	93			70-130	Pass	
Chromium			%	93			70-130	Pass	
Copper			%	88			70-130	Pass	
Lead			%	98			70-130	Pass	
Mercury			%	84			70-130	Pass	
Nickel			%	91			70-130	Pass	
Zinc			%	86			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De03119	NCP	%	89			70-130	Pass	
Cadmium	S15-De03119	NCP	%	93			70-130	Pass	
Chromium	S15-De03119	NCP	%	98			70-130	Pass	
Copper	S15-De03119	NCP	%	93			70-130	Pass	
Lead	S15-De03119	NCP	%	100			70-130	Pass	
Mercury	S15-De03119	NCP	%	92			70-130	Pass	
Nickel	S15-De03119	NCP	%	96			70-130	Pass	
Zinc	S15-De03119	NCP	%	89			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S15-De03118	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Cadmium	S15-De03118	NCP	mg/L	< 0.0005	< 0.0005	<1	30%	Pass	
Chromium	S15-De03118	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Copper	S15-De03118	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Lead	S15-De03118	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	S15-De03118	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S15-De03118	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc	S15-De03118	NCP	mg/L	0.007	0.007	4.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Charl Du Preez	Analytical Services Manager
Ivan Taylor	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Certificate of Analysis

JBS & G Australia (NSW & WA) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: **Nathan Cussen**

Report **482392-S**
Project name ATP
Project ID 50720
Received Date Dec 07, 2015

Client Sample ID			BH01 0.0-1.0	BH01 1.0-2.0	BH02 0.0-1.0	BH03 0.0-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06582	S15-De06583	S15-De06584	S15-De06585
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	51	450	110	250
TRH C29-C36	50	mg/kg	< 50	300	300	410
TRH C10-36 (Total)	50	mg/kg	51	750	410	660
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Propanone (Acetone)	5	mg/kg	-	-	< 5	< 5
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	< 0.5
Allyl chloride	0.05	mg/kg	-	-	< 0.05	< 0.05
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			BH01 0.0-1.0 Soil	BH01 1.0-2.0 Soil	BH02 0.0-1.0 Soil	BH03 0.0-1.0 Soil
Sample Matrix			S15-De06582	S15-De06583	S15-De06584	S15-De06585
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	-	-	98	97
4-Bromofluorobenzene (surr.)	1	%	-	-	73	85
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.6	5.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.8	5.7	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.1	6.0	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Anthracene	0.5	mg/kg	0.6	2.2	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	1.6	5.7	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	1.2	4.0	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.9	4.2	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	1.2	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	1.0	3.4	< 0.5	< 0.5
Chrysene	0.5	mg/kg	1.1	4.3	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	2.9	8.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01 0.0-1.0 Soil	BH01 1.0-2.0 Soil	BH02 0.0-1.0 Soil	BH03 0.0-1.0 Soil
Sample Matrix			S15-De06582	S15-De06583	S15-De06584	S15-De06585
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	1.9	6.7	< 0.5	< 0.5
Pyrene	0.5	mg/kg	2.7	8.1	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	14	50	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	100	95	98	97
p-Terphenyl-d14 (surr.)	1	%	99	93	96	97
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	-	< 1	< 1
Dibutylchloroendate (surr.)	1	%	-	-	88	101
Tetrachloro-m-xylene (surr.)	1	%	-	-	86	86
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibutylchloroendate (surr.)	1	%	-	-	88	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	660	370	540
TRH >C34-C40	100	mg/kg	< 100	180	< 100	160
Total Organic Carbon ^{M10}	0.1	%	-	-	2.3	2.2
% Moisture	0.1	%	12	13	7.3	12

Client Sample ID			BH01 0.0-1.0	BH01 1.0-2.0	BH02 0.0-1.0	BH03 0.0-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06582	S15-De06583	S15-De06584	S15-De06585
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	11	13	2.6	12
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.6	7.6	12	13
Copper	5	mg/kg	590	490	61	17
Lead	5	mg/kg	240	270	52	14
Mercury	0.05	mg/kg	0.24	0.36	< 0.05	< 0.05
Nickel	5	mg/kg	12	12	8.2	< 5
Zinc	5	mg/kg	210	220	100	26

Client Sample ID			BH03 1.0-2.0	BH04 0.0-1.0	BH04 1.0-2.0	BH04 2.0-4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06586	S15-De06587	S15-De06588	S15-De06589
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	61	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	2400	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	1900	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	4400	< 50	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	-	< 5	< 5	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	-
Allyl chloride	0.05	mg/kg	-	< 0.05	< 0.05	-
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-

Client Sample ID			BH03 1.0-2.0	BH04 0.0-1.0	BH04 1.0-2.0	BH04 2.0-4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06586	S15-De06587	S15-De06588	S15-De06589
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Volatile Organics						
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	-
Fluorobenzene (surr.)	1	%	-	102	99	-
4-Bromofluorobenzene (surr.)	1	%	-	79	81	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	370	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	1.4	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.7	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	2.0	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	1.2	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	1.0	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	1.9	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH03 1.0-2.0 Soil	BH04 0.0-1.0 Soil	BH04 1.0-2.0 Soil	BH04 2.0-4.0 Soil
Sample Matrix			S15-De06586	S15-De06587	S15-De06588	S15-De06589
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	1.8	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	10	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	94	97	76	81
p-Terphenyl-d14 (surr.)	1	%	102	94	84	90
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
α-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
β-BHC	0.05	mg/kg	-	< 0.05	-	-
δ-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
γ-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 1	-	-
Dibutylchloredate (surr.)	1	%	-	101	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	84	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchloredate (surr.)	1	%	-	101	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	370	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	3600	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	520	< 100	< 100	< 100
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	86	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	8.1	-	-
Total Organic Carbon ^{M10}	0.1	%	-	5.4	-	-
% Moisture	0.1	%	7.2	21	25	18

Client Sample ID			BH03 1.0-2.0	BH04 0.0-1.0	BH04 1.0-2.0	BH04 2.0-4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06586	S15-De06587	S15-De06588	S15-De06589
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	13	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.6	8.1	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	5.4	18	< 5
Copper	5	mg/kg	< 5	58	6.5	< 5
Lead	5	mg/kg	< 5	15000	20	6.0
Mercury	0.05	mg/kg	< 0.05	0.23	0.54	< 0.05
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	5.1	200	15	< 5

Client Sample ID			BH04 5.0-5.5	BH04 5.5-6.0	BH05 0.0-0.1	BH05 1.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06590	S15-De06591	S15-De06592	S15-De06593
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	89	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	76	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	170	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	< 5	-	< 5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	< 0.5	-
Allyl chloride	0.05	mg/kg	< 0.05	-	< 0.05	-
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH04 5.0-5.5 Soil	BH04 5.5-6.0 Soil	BH05 0.0-0.1 Soil	BH05 1.0-2.1 Soil
Sample Matrix			S15-De06590	S15-De06591	S15-De06592	S15-De06593
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Bromoform	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
Fluorobenzene (surr.)	1	%	105	-	105	-
4-Bromofluorobenzene (surr.)	1	%	95	-	97	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	2.4	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	2.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	2.9	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.7	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	1.8	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	1.4	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.7	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	1.6	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH04 5.0-5.5 Soil	BH04 5.5-6.0 Soil	BH05 0.0-0.1 Soil	BH05 1.0-2.1 Soil
Sample Matrix			S15-De06590	S15-De06591	S15-De06592	S15-De06593
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	3.4	0.8
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	2.1	0.8
Pyrene	0.5	mg/kg	< 0.5	< 0.5	3.2	0.8
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	19	2.4
2-Fluorobiphenyl (surr.)	1	%	74	76	76	79
p-Terphenyl-d14 (surr.)	1	%	82	85	88	89
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
α-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
β-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
δ-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
γ-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Dibutylchloredate (surr.)	1	%	98	-	104	-
Tetrachloro-m-xylene (surr.)	1	%	104	-	78	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchloredate (surr.)	1	%	98	-	104	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	150	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			BH04 5.0-5.5	BH04 5.5-6.0	BH05 0.0-0.1	BH05 1.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06590	S15-De06591	S15-De06592	S15-De06593
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	140	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	8.8	-
Total Organic Carbon ^{M10}	0.1	%	-	-	2.3	-
% Moisture	0.1	%	7.7	10	9.3	12
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	37	-
Heavy Metals						
Arsenic	2	mg/kg	14	5.5	2.4	4.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.1	6.4	9.7	32
Copper	5	mg/kg	20	25	55	29
Lead	5	mg/kg	< 5	7.3	110	68
Mercury	0.05	mg/kg	< 0.05	0.05	0.09	0.07
Nickel	5	mg/kg	< 5	16	< 5	9.9
Zinc	5	mg/kg	< 5	59	69	90
SPOCAS Suite						
pH-KCL	0.1	pH Units	-	4.6	-	-
pH-OX	0.1	pH Units	-	5.1	-	-
Acid trail - Titratable Actual Acidity	2	mol H+/t	-	29	-	-
Acid trail - Titratable Peroxide Acidity	2	mol H+/t	-	60	-	-
Acid trail - Titratable Sulfidic Acidity	2	mol H+/t	-	31	-	-
sulfidic - TAA equiv. S% pyrite	0.02	% pyrite S	-	0.05	-	-
sulfidic - TPA equiv. S% pyrite	0.02	% pyrite S	-	0.10	-	-
sulfidic - TSA equiv. S% pyrite	0.02	% pyrite S	-	0.05	-	-
Sulfur - KCl Extractable	0.02	% S	-	< 0.02	-	-
Sulfur - Peroxide	0.02	% S	-	< 0.02	-	-
Sulfur - Peroxide Oxidisable Sulfur	0.02	% S	-	< 0.02	-	-
acidity - Peroxide Oxidisable Sulfur	10	mol H+/t	-	< 10	-	-
HCl Extractable Sulfur	0.02	% S	-	n/a	-	-
Net Acid soluble sulfur	0.02	% S	-	n/a	-	-
Net Acid soluble sulfur - acidity units	10	mol H+/t	-	n/a	-	-
Net Acid soluble sulfur - equivalent S% pyrite ^{S02}	0.02	% S	-	n/a	-	-
Calcium - KCl Extractable	0.02	% Ca	-	< 0.02	-	-
Calcium - Peroxide	0.02	% Ca	-	< 0.02	-	-
Acid Reacted Calcium	0.02	% Ca	-	< 0.02	-	-
acidity - Acid Reacted Calcium	10	mol H+/t	-	< 10	-	-
sulfidic - Acid Reacted Ca equiv. S% pyrite	0.02	% S	-	< 0.02	-	-
Magnesium - KCl Extractable	0.02	% Mg	-	0.04	-	-
Magnesium - Peroxide	0.02	% Mg	-	0.04	-	-
Acid Reacted Magnesium	0.02	% Mg	-	< 0.02	-	-
acidity - Acid Reacted Magnesium	10	mol H+/t	-	< 10	-	-
sulfidic - Acid Reacted Mg equiv. S% pyrite	0.02	% S	-	< 0.02	-	-
Acid Neutralising Capacity	0.02	%CaCO3	-	n/a	-	-
Acid Neutralising Capacity - Acidity units	10	mol H+/t	-	n/a	-	-
Acid Neutralising Capacity equivalent S% pyrite	0.02	% S	-	n/a	-	-
ANC Fineness Factor		factor	-	1.5	-	-
Net Acidity (sulfur units) - SPOCAS	0.02	% S	-	0.05	-	-
Net Acidity (acidity units) - SPOCAS	10	mol H+/t	-	29	-	-
Liming rate - SPOCAS	1	kg CaCO3/t	-	2.0	-	-

Client Sample ID			BH04 5.0-5.5	BH04 5.5-6.0	BH05 0.0-0.1	BH05 1.0-2.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06590	S15-De06591	S15-De06592	S15-De06593
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Extraneous Material						
<2mm Fraction	0.005	g	-	n/a	-	-
>2mm Fraction	0.005	g	-	n/a	-	-
Analysed Material	0.1	%	-	100	-	-
Extraneous Material	0.1	%	-	< 0.1	-	-

Client Sample ID			BH06 0.0-0.5	BH07 0.0-1.0	BH07 1.0-1.5	BH07 2.0-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06595	S15-De06596	S15-De06597	S15-De06598
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Propanone (Acetone)	5	mg/kg	< 5	< 5	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	-
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			BH06 0.0-0.5 Soil S15-De06595 Dec 06, 2015	BH07 0.0-1.0 Soil S15-De06596 Dec 06, 2015	BH07 1.0-1.5 Soil S15-De06597 Dec 06, 2015	BH07 2.0-3.0 Soil S15-De06598 Dec 06, 2015
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Chloroform	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
Fluorobenzene (surr.)	1	%	103	103	-	-
4-Bromofluorobenzene (surr.)	1	%	84	90	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	0.6	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.0	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.3	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.6	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	0.9	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	0.9	< 0.5	-

Client Sample ID			BH06 0.0-0.5	BH07 0.0-1.0	BH07 1.0-1.5	BH07 2.0-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06595	S15-De06596	S15-De06597	S15-De06598
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Total PAH*	0.5	mg/kg	< 0.5	2.4	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	74	76	78	-
p-Terphenyl-d14 (surr.)	1	%	82	85	85	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Dibutylchloredate (surr.)	1	%	86	105	-	-
Tetrachloro-m-xylene (surr.)	1	%	74	87	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchloredate (surr.)	1	%	86	105	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	120	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	9.9	-	-
Total Organic Carbon ^{M10}	0.1	%	5.9	0.7	-	-
% Moisture	0.1	%	7.6	9.1	15	17
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	41	-	-

Client Sample ID			BH06 0.0-0.5 Soil	BH07 0.0-1.0 Soil	BH07 1.0-1.5 Soil	BH07 2.0-3.0 Soil
Sample Matrix			S15-De06595	S15-De06596	S15-De06597	S15-De06598
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	25	4.0	9.0	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	30	12	11	-
Copper	5	mg/kg	2100	490	1100	-
Lead	5	mg/kg	250	140	380	-
Mercury	0.05	mg/kg	0.13	0.09	< 0.05	-
Nickel	5	mg/kg	21	17	< 5	-
Zinc	5	mg/kg	230	180	260	-
SPOCAS Suite						
pH-KCL	0.1	pH Units	-	-	5.2	4.4
pH-OX	0.1	pH Units	-	-	5.9	5.0
Acid trail - Titratable Actual Acidity	2	mol H+/t	-	-	17	52
Acid trail - Titratable Peroxide Acidity	2	mol H+/t	-	-	14	75
Acid trail - Titratable Sulfidic Acidity	2	mol H+/t	-	-	< 2	23
sulfidic - TAA equiv. S% pyrite	0.02	% pyrite S	-	-	0.03	0.08
sulfidic - TPA equiv. S% pyrite	0.02	% pyrite S	-	-	0.02	0.12
sulfidic - TSA equiv. S% pyrite	0.02	% pyrite S	-	-	< 0.02	0.04
Sulfur - KCl Extractable	0.02	% S	-	-	< 0.02	< 0.02
Sulfur - Peroxide	0.02	% S	-	-	0.02	< 0.02
Sulfur - Peroxide Oxidisable Sulfur	0.02	% S	-	-	0.02	< 0.02
acidity - Peroxide Oxidisable Sulfur	10	mol H+/t	-	-	13	< 10
HCl Extractable Sulfur	0.02	% S	-	-	n/a	< 0.02
Net Acid soluble sulfur	0.02	% S	-	-	n/a	< 0.02
Net Acid soluble sulfur - acidity units	10	mol H+/t	-	-	n/a	< 10
Net Acid soluble sulfur - equivalent S% pyrite ^{S02}	0.02	% S	-	-	n/a	< 0.02
Calcium - KCl Extractable	0.02	% Ca	-	-	0.15	< 0.02
Calcium - Peroxide	0.02	% Ca	-	-	0.16	< 0.02
Acid Reacted Calcium	0.02	% Ca	-	-	< 0.02	< 0.02
acidity - Acid Reacted Calcium	10	mol H+/t	-	-	< 10	< 10
sulfidic - Acid Reacted Ca equiv. S% pyrite	0.02	% S	-	-	< 0.02	< 0.02
Magnesium - KCl Extractable	0.02	% Mg	-	-	0.02	0.03
Magnesium - Peroxide	0.02	% Mg	-	-	0.03	0.03
Acid Reacted Magnesium	0.02	% Mg	-	-	< 0.02	< 0.02
acidity - Acid Reacted Magnesium	10	mol H+/t	-	-	< 10	< 10
sulfidic - Acid Reacted Mg equiv. S% pyrite	0.02	% S	-	-	< 0.02	< 0.02
Acid Neutralising Capacity	0.02	%CaCO3	-	-	n/a	n/a
Acid Neutralising Capacity - Acidity units	10	mol H+/t	-	-	n/a	n/a
Acid Neutralising Capacity equivalent S% pyrite	0.02	% S	-	-	n/a	n/a
ANC Fineness Factor		factor	-	-	1.5	1.5
Net Acidity (sulfur units) - SPOCAS	0.02	% S	-	-	0.05	0.08
Net Acidity (acidity units) - SPOCAS	10	mol H+/t	-	-	31	52
Liming rate - SPOCAS	1	kg CaCO3/t	-	-	2.0	4.0
Extraneous Material						
<2mm Fraction	0.005	g	-	-	n/a	n/a
>2mm Fraction	0.005	g	-	-	n/a	n/a
Analysed Material	0.1	%	-	-	100	100
Extraneous Material	0.1	%	-	-	< 0.1	< 0.1

Client Sample ID			BH08 0.0-1.0 Soil S15-De06599 Dec 06, 2015	BH08 1.0-2.0 Soil S15-De06600 Dec 06, 2015	BH09 0.0-1.0 Soil S15-De06602 Dec 06, 2015	BH09 1.0-2.0 Soil S15-De06603 Dec 06, 2015
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	180	< 50	250	350
TRH C29-C36	50	mg/kg	140	< 50	790	320
TRH C10-36 (Total)	50	mg/kg	320	< 50	1000	670
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	< 5	-	< 5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	< 0.5	-
Allyl chloride	0.05	mg/kg	< 0.05	-	< 0.05	-
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	-	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	-	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	< 0.5	-

Client Sample ID			BH08 0.0-1.0 Soil	BH08 1.0-2.0 Soil	BH09 0.0-1.0 Soil	BH09 1.0-2.0 Soil
Sample Matrix			S15-De06599	S15-De06600	S15-De06602	S15-De06603
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	< 0.3	-
Fluorobenzene (surr.)	1	%	100	-	106	-
4-Bromofluorobenzene (surr.)	1	%	103	-	90	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	1.8	1.1	1.3	2.6
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	2.1	1.4	1.6	2.9
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.3	1.7	1.8	3.1
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	0.5	< 0.5	< 0.5	1.3
Benz(a)anthracene	0.5	mg/kg	1.9	1.0	1.1	3.1
Benzo(a)pyrene	0.5	mg/kg	1.2	0.9	1.0	1.8
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	1.7	0.7	0.8	1.9
Benzo(g,h,i)perylene	0.5	mg/kg	0.9	< 0.5	0.7	1.4
Benzo(k)fluoranthene	0.5	mg/kg	1.6	0.6	0.8	2.1
Chrysene	0.5	mg/kg	1.5	0.8	0.9	2.4
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	4.5	1.9	2.1	6.2
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	0.6	< 0.5	< 0.5	1.0
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	3.1	1.2	1.0	3.5
Pyrene	0.5	mg/kg	3.9	1.9	2.3	6.6
Total PAH*	0.5	mg/kg	21	9.0	11	31
2-Fluorobiphenyl (surr.)	1	%	78	82	74	79
p-Terphenyl-d14 (surr.)	1	%	90	92	88	92
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-

Client Sample ID			BH08 0.0-1.0 Soil	BH08 1.0-2.0 Soil	BH09 0.0-1.0 Soil	BH09 1.0-2.0 Soil
Sample Matrix			S15-De06599	S15-De06600	S15-De06602	S15-De06603
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Dibutylchlorendate (surr.)	1	%	105	-	108	-
Tetrachloro-m-xylene (surr.)	1	%	78	-	109	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	105	-	108	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	310	< 100	790	610
TRH >C34-C40	100	mg/kg	< 100	< 100	570	160
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	150	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	8.2	-
Total Organic Carbon ^{M10}	0.1	%	2.9	-	11	-
% Moisture	0.1	%	12	10	8.9	13
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	33	-
Heavy Metals						
Arsenic	2	mg/kg	13	4.2	12	21
Cadmium	0.4	mg/kg	0.6	< 0.4	< 0.4	0.5
Chromium	5	mg/kg	6.3	< 5	12	12
Copper	5	mg/kg	3000	100	1200	2100
Lead	5	mg/kg	1200	51	1700	4300
Mercury	0.05	mg/kg	0.27	0.09	17	2.7
Nickel	5	mg/kg	7.5	< 5	16	22
Zinc	5	mg/kg	1100	57	440	590

Client Sample ID			BH09 2.0-3.0 Soil	BH09 3.0-4.0 Soil	BH09 6.0-6.5 Soil	BH09 8.0 Soil
Sample Matrix			S15-De06604	S15-De06605	S15-De06606	S15-De06607
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	-	-	< 5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.05	mg/kg	-	-	< 0.05	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH09 2.0-3.0 Soil	BH09 3.0-4.0 Soil	BH09 6.0-6.5 Soil	BH09 8.0 Soil
Sample Matrix			S15-De06604	S15-De06605	S15-De06606	S15-De06607
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	103	-
4-Bromofluorobenzene (surr.)	1	%	-	-	100	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	76	77	94	-
p-Terphenyl-d14 (surr.)	1	%	87	85	103	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	120	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	6.2	-	-
% Moisture	0.1	%	11	13	14	13
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	4.5	-	-

Client Sample ID			BH09 2.0-3.0 Soil	BH09 3.0-4.0 Soil	BH09 6.0-6.5 Soil	BH09 8.0 Soil
Sample Matrix			S15-De06604	S15-De06605	S15-De06606	S15-De06607
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.1	2.8	5.0	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	6.9	10	8.2	-
Copper	5	mg/kg	86	6.9	50	-
Lead	5	mg/kg	110	15	150	-
Mercury	0.05	mg/kg	0.13	< 0.05	0.10	-
Nickel	5	mg/kg	< 5	< 5	< 5	-
Zinc	5	mg/kg	24	< 5	17	-
SPOCAS Suite						
pH-KCL	0.1	pH Units	-	-	-	4.5
pH-OX	0.1	pH Units	-	-	-	5.0
Acid trail - Titratable Actual Acidity	2	mol H+/t	-	-	-	49
Acid trail - Titratable Peroxide Acidity	2	mol H+/t	-	-	-	66
Acid trail - Titratable Sulfidic Acidity	2	mol H+/t	-	-	-	16
sulfidic - TAA equiv. S% pyrite	0.02	% pyrite S	-	-	-	0.08
sulfidic - TPA equiv. S% pyrite	0.02	% pyrite S	-	-	-	0.11
sulfidic - TSA equiv. S% pyrite	0.02	% pyrite S	-	-	-	0.03
Sulfur - KCl Extractable	0.02	% S	-	-	-	< 0.02
Sulfur - Peroxide	0.02	% S	-	-	-	< 0.02
Sulfur - Peroxide Oxidisable Sulfur	0.02	% S	-	-	-	< 0.02
acidity - Peroxide Oxidisable Sulfur	10	mol H+/t	-	-	-	< 10
HCl Extractable Sulfur	0.02	% S	-	-	-	n/a
Net Acid soluble sulfur	0.02	% S	-	-	-	n/a
Net Acid soluble sulfur - acidity units	10	mol H+/t	-	-	-	n/a
Net Acid soluble sulfur - equivalent S% pyrite ^{S02}	0.02	% S	-	-	-	n/a
Calcium - KCl Extractable	0.02	% Ca	-	-	-	< 0.02
Calcium - Peroxide	0.02	% Ca	-	-	-	< 0.02
Acid Reacted Calcium	0.02	% Ca	-	-	-	< 0.02
acidity - Acid Reacted Calcium	10	mol H+/t	-	-	-	< 10
sulfidic - Acid Reacted Ca equiv. S% pyrite	0.02	% S	-	-	-	< 0.02
Magnesium - KCl Extractable	0.02	% Mg	-	-	-	< 0.02
Magnesium - Peroxide	0.02	% Mg	-	-	-	< 0.02
Acid Reacted Magnesium	0.02	% Mg	-	-	-	< 0.02
acidity - Acid Reacted Magnesium	10	mol H+/t	-	-	-	< 10
sulfidic - Acid Reacted Mg equiv. S% pyrite	0.02	% S	-	-	-	< 0.02
Acid Neutralising Capacity	0.02	%CaCO3	-	-	-	n/a
Acid Neutralising Capacity - Acidity units	10	mol H+/t	-	-	-	n/a
Acid Neutralising Capacity equivalent S% pyrite	0.02	% S	-	-	-	n/a
ANC Fineness Factor		factor	-	-	-	1.5
Net Acidity (sulfur units) - SPOCAS	0.02	% S	-	-	-	0.08
Net Acidity (acidity units) - SPOCAS	10	mol H+/t	-	-	-	49
Liming rate - SPOCAS	1	kg CaCO3/t	-	-	-	4.0
Extraneous Material						
<2mm Fraction	0.005	g	-	-	-	n/a
>2mm Fraction	0.005	g	-	-	-	n/a
Analysed Material	0.1	%	-	-	-	100
Extraneous Material	0.1	%	-	-	-	< 0.1

Client Sample ID			BH10 0.0-1.0 Soil S15-De06608 Dec 06, 2015	BH12 0.0-1.0 Soil S15-De06609 Dec 06, 2015	BH12 1.0-2.0 Soil S15-De06610 Dec 06, 2015	BH12 2.0-3.0 Soil S15-De06611 Dec 06, 2015
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	79	270	< 50	< 50
TRH C29-C36	50	mg/kg	500	140	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	580	410	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Propanone (Acetone)	5	mg/kg	< 5	< 5	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	-
Allyl chloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			BH10 0.0-1.0 Soil	BH12 0.0-1.0 Soil	BH12 1.0-2.0 Soil	BH12 2.0-3.0 Soil
Sample Matrix			S15-De06608	S15-De06609	S15-De06610	S15-De06611
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
Fluorobenzene (surr.)	1	%	104	107	-	-
4-Bromofluorobenzene (surr.)	1	%	94	104	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	2.1	0.9	1.4
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	2.8	< 0.5	1.3
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	3.1	0.6	1.5
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	3.3	1.2	1.8
Acenaphthene	0.5	mg/kg	< 0.5	1.4	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	2.9	< 0.5	0.7
Benz(a)anthracene	0.5	mg/kg	< 0.5	2.7	< 0.5	1.0
Benzo(a)pyrene	0.5	mg/kg	< 0.5	2.2	< 0.5	1.0
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	1.3	< 0.5	0.9
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	1.5	< 0.5	0.7
Chrysene	0.5	mg/kg	< 0.5	2.0	< 0.5	0.8
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	5.6	< 0.5	2.2
Fluorene	0.5	mg/kg	< 0.5	2.1	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	3.2	< 0.5	0.6
Phenanthrene	0.5	mg/kg	< 0.5	8.9	< 0.5	2.5
Pyrene	0.5	mg/kg	< 0.5	5.4	< 0.5	2.1
Total PAH*	0.5	mg/kg	< 0.5	41	< 0.5	13
2-Fluorobiphenyl (surr.)	1	%	73	76	79	76
p-Terphenyl-d14 (surr.)	1	%	84	89	86	83
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			BH10 0.0-1.0 Soil	BH12 0.0-1.0 Soil	BH12 1.0-2.0 Soil	BH12 2.0-3.0 Soil
Sample Matrix			S15-De06608	S15-De06609	S15-De06610	S15-De06611
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Dibutylchloredate (surr.)	1	%	126	103	-	-
Tetrachloro-m-xylene (surr.)	1	%	75	72	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchloredate (surr.)	1	%	126	103	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	180	370	< 100	< 100
TRH >C34-C40	100	mg/kg	500	< 100	< 100	< 100
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	140	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	8.1	-	-
Total Organic Carbon ^{M10}	0.1	%	1.0	9.5	-	-
% Moisture	0.1	%	5.7	14	14	15
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	14	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.0	25	6.1	6.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	8.7	< 5	8.8
Copper	5	mg/kg	130	1400	150	320
Lead	5	mg/kg	160	1200	100	270
Mercury	0.05	mg/kg	0.21	0.23	0.05	0.12
Nickel	5	mg/kg	13	12	< 5	< 5
Zinc	5	mg/kg	84	160	20	39

Client Sample ID			BH12 3.0-4.0 Soil	BH12 4.0-5.0 Soil	BH13 0.0-1.0 Soil	BH13 1.0-2.0 Soil
Sample Matrix			S15-De06612	S15-De06613	S15-De06615	S15-De06616
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	120	< 50	240	110
TRH C29-C36	50	mg/kg	< 50	< 50	140	120
TRH C10-36 (Total)	50	mg/kg	120	< 50	380	230
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	-	-	< 5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.05	mg/kg	-	-	< 0.05	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH12 3.0-4.0 Soil	BH12 4.0-5.0 Soil	BH13 0.0-1.0 Soil	BH13 1.0-2.0 Soil
Sample Matrix			S15-De06612	S15-De06613	S15-De06615	S15-De06616
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
Fluorobenzene (surr.)	1	%	-	-	104	-
4-Bromofluorobenzene (surr.)	1	%	-	-	98	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	< 0.5	1.3	1.0
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.1	0.6	1.5	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.5	1.2	1.8	1.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.9	< 0.5	1.5	1.0
Benzo(a)pyrene	0.5	mg/kg	0.7	< 0.5	0.9	0.7
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	0.9	0.6
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.1	0.8
Chrysene	0.5	mg/kg	0.7	< 0.5	1.1	0.9
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	1.9	< 0.5	2.9	1.8
Fluorene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	3.0	< 0.5	1.7	1.1
Pyrene	0.5	mg/kg	1.8	< 0.5	2.6	1.9
Total PAH*	0.5	mg/kg	11	< 0.5	13	8.8
2-Fluorobiphenyl (surr.)	1	%	81	79	72	75
p-Terphenyl-d14 (surr.)	1	%	92	84	71	86
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			BH12 3.0-4.0	BH12 4.0-5.0	BH13 0.0-1.0	BH13 1.0-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06612	S15-De06613	S15-De06615	S15-De06616
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	102	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	73	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	-
Total PCB*	0.5	mg/kg	-	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	-	102	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	150	< 100	360	170
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	23	50	-
pH (1:5 Aqueous extract)	0.1	pH Units	-	6.5	7.1	-
Total Organic Carbon ^{M10}	0.1	%	-	-	1.8	-
% Moisture	0.1	%	7.4	17	11	12
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	6.8	12	-
Heavy Metals						
Arsenic	2	mg/kg	3.7	4.0	21	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.7	< 0.4
Chromium	5	mg/kg	< 5	6.6	< 5	8.8
Copper	5	mg/kg	110	33	6700	550
Lead	5	mg/kg	280	26	1100	190
Mercury	0.05	mg/kg	0.05	< 0.05	0.20	0.22
Nickel	5	mg/kg	< 5	< 5	11	11
Zinc	5	mg/kg	18	15	1000	190

Client Sample ID			BH14 0.3-1.0 Soil	BH15 0.0-1.0 Soil	BH15 1.0-2.0 Soil	BH15 2.0-3.0 Soil
Sample Matrix			S15-De06618	S15-De06619	S15-De06620	S15-De06621
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	5	mg/kg	< 5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.05	mg/kg	< 0.05	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			BH14 0.3-1.0 Soil	BH15 0.0-1.0 Soil	BH15 1.0-2.0 Soil	BH15 2.0-3.0 Soil
Sample Matrix			S15-De06618	S15-De06619	S15-De06620	S15-De06621
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Trichloroethene	0.5	mg/kg	< 0.5	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
Fluorobenzene (surr.)	1	%	105	-	-	-
4-Bromofluorobenzene (surr.)	1	%	117	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	1.1	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.3	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.6	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.0	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	0.9	2.2	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	1.7	< 0.5
Pyrene	0.5	mg/kg	< 0.5	1.0	2.1	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	1.9	11	< 0.5
2-Fluorobiphenyl (surr.)	1	%	80	77	77	77
p-Terphenyl-d14 (surr.)	1	%	86	99	98	93
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			BH14 0.3-1.0 Soil	BH15 0.0-1.0 Soil	BH15 1.0-2.0 Soil	BH15 2.0-3.0 Soil
Sample Matrix			S15-De06618	S15-De06619	S15-De06620	S15-De06621
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Dibutylchloredate (surr.)	1	%	120	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	106	113	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchloredate (surr.)	1	%	120	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Total Organic Carbon ^{M10}	0.1	%	1.3	-	-	-
% Moisture	0.1	%	4.8	6.9	7.9	7.0
Heavy Metals						
Arsenic	2	mg/kg	2.3	14	3.6	5.1
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	14	13	5.7	9.1
Copper	5	mg/kg	150	810	240	13
Lead	5	mg/kg	88	380	140	11
Mercury	0.05	mg/kg	< 0.05	0.20	0.06	< 0.05
Nickel	5	mg/kg	7.8	14	< 5	< 5
Zinc	5	mg/kg	100	440	110	< 5

Client Sample ID			BH16 0.0-1.0 Soil	BH16 1.0-2.0 Soil	BH16 2.0-3.0 Soil	BH16 4.0-4.5 Soil
Sample Matrix			S15-De06623	S15-De06624	S15-De06625	S15-De06626
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	-
2-Propanone (Acetone)	5	mg/kg	< 5	-	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	-
Allyl chloride	0.05	mg/kg	< 0.05	-	-	-
Benzene	0.1	mg/kg	< 0.1	-	-	-
Bromobenzene	0.5	mg/kg	< 0.5	-	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	-
Bromoform	0.5	mg/kg	< 0.5	-	-	-
Bromomethane	0.5	mg/kg	< 0.5	-	-	-
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Chloroethane	0.5	mg/kg	< 0.5	-	-	-
Chloroform	0.5	mg/kg	< 0.5	-	-	-
Chloromethane	0.5	mg/kg	< 0.5	-	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	-
Dibromomethane	0.5	mg/kg	< 0.5	-	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
Iodomethane	0.5	mg/kg	< 0.5	-	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			BH16 0.0-1.0 Soil	BH16 1.0-2.0 Soil	BH16 2.0-3.0 Soil	BH16 4.0-4.5 Soil
Sample Matrix			S15-De06623	S15-De06624	S15-De06625	S15-De06626
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Styrene	0.5	mg/kg	< 0.5	-	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	-
Trichloroethene	0.5	mg/kg	< 0.5	-	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
Fluorobenzene (surr.)	1	%	103	-	-	-
4-Bromofluorobenzene (surr.)	1	%	97	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.1	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.4	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	0.7	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	0.6	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.7	< 0.5	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	0.6	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	0.6	< 0.5	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	1.6	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	1.0	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	1.4	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	7.2	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	84	76	78	-
p-Terphenyl-d14 (surr.)	1	%	104	94	97	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			BH16 0.0-1.0 Soil	BH16 1.0-2.0 Soil	BH16 2.0-3.0 Soil	BH16 4.0-4.5 Soil
Sample Matrix			S15-De06623	S15-De06624	S15-De06625	S15-De06626
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	97	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	76	-	-	-
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	97	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	-	-	-	33
pH (1:5 Aqueous extract)	0.1	pH Units	-	-	-	5.0
Total Organic Carbon ^{M10}	0.1	%	1.6	-	-	-
% Moisture	0.1	%	11	16	15	21
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	6.2
Heavy Metals						
Arsenic	2	mg/kg	2.7	4.1	2.9	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	13	12	5.5	-
Copper	5	mg/kg	58	7.0	9.0	-
Lead	5	mg/kg	47	10	9.5	-
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Nickel	5	mg/kg	< 5	< 5	< 5	-
Zinc	5	mg/kg	57	5.3	9.0	-

Client Sample ID			BH17 0.0-1.0 Soil	BH17 1.0-2.0 Soil	BH17 2.0-3.0 Soil	BH18 0.0-1.0 Soil
Sample Matrix			S15-De06627	S15-De06628	S15-De06629	S15-De06632
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	450
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	310
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	760
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	-	-	< 0.5
2-Propanone (Acetone)	5	mg/kg	< 5	-	-	< 5
4-Chlorotoluene	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	-	-	< 0.5
Allyl chloride	0.05	mg/kg	< 0.05	-	-	< 0.05
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromoform	0.5	mg/kg	< 0.5	-	-	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloroform	0.5	mg/kg	< 0.5	-	-	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	-	-	< 0.5

Client Sample ID			BH17 0.0-1.0 Soil	BH17 1.0-2.0 Soil	BH17 2.0-3.0 Soil	BH18 0.0-1.0 Soil
Sample Matrix			S15-De06627	S15-De06628	S15-De06629	S15-De06632
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Styrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	-	-	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	-	-	< 0.5
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	< 0.3
Fluorobenzene (surr.)	1	%	104	-	-	102
4-Bromofluorobenzene (surr.)	1	%	77	-	-	106
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	4.3
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	4.5
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	4.8
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.6
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	3.7
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	3.2
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	3.0
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	2.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	3.1
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	6.0
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.3
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	4.9
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	6.1
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	37
2-Fluorobiphenyl (surr.)	1	%	71	75	75	76
p-Terphenyl-d14 (surr.)	1	%	89	93	92	100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05

Client Sample ID			BH17 0.0-1.0 Soil	BH17 1.0-2.0 Soil	BH17 2.0-3.0 Soil	BH18 0.0-1.0 Soil
Sample Matrix			S15-De06627	S15-De06628	S15-De06629	S15-De06632
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	-	< 0.2
Toxaphene	1	mg/kg	< 1	-	-	< 1
Dibutylchloredate (surr.)	1	%	78	-	-	116
Tetrachloro-m-xylene (surr.)	1	%	116	-	-	102
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibutylchloredate (surr.)	1	%	78	-	-	116
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	710
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	160
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	93	-	-	-
pH (1:5 Aqueous extract)	0.1	pH Units	7.8	-	-	-
Total Organic Carbon ^{M10}	0.1	%	2.6	-	-	3.6
% Moisture	0.1	%	16	16	14	9.6
Ion Exchange Properties						
Cation Exchange Capacity	0.05	meq/100g	11	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.2	4.9	2.6	4.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	14	10	8.3
Copper	5	mg/kg	87	36	< 5	140
Lead	5	mg/kg	51	27	9.3	88
Mercury	0.05	mg/kg	0.08	< 0.05	< 0.05	0.08
Nickel	5	mg/kg	< 5	< 5	< 5	8.2
Zinc	5	mg/kg	180	28	6.3	130

Client Sample ID			BH18 1.0-2.0 Soil	BH18 2.0-3.0 Soil	BH05 3.5-4.0 Soil	BH07 3.0-4.0 Soil
Sample Matrix			S15-De06633	S15-De06634	S15-De06637	S15-De06638
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Propanone (Acetone)	5	mg/kg	-	-	< 5	< 5
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	< 0.5
Allyl chloride	0.05	mg/kg	-	-	< 0.05	< 0.05
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	-	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	-	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			BH18 1.0-2.0 Soil	BH18 2.0-3.0 Soil	BH05 3.5-4.0 Soil	BH07 3.0-4.0 Soil
Sample Matrix			S15-De06633	S15-De06634	S15-De06637	S15-De06638
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	-	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	< 0.5
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	< 0.3
Fluorobenzene (surr.)	1	%	-	-	103	102
4-Bromofluorobenzene (surr.)	1	%	-	-	105	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	79	78	78
p-Terphenyl-d14 (surr.)	1	%	94	96	97	98
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05

Client Sample ID			BH18 1.0-2.0	BH18 2.0-3.0	BH05 3.5-4.0	BH07 3.0-4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06633	S15-De06634	S15-De06637	S15-De06638
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	-	< 1	< 1
Dibutylchloredate (surr.)	1	%	-	-	85	93
Tetrachloro-m-xylene (surr.)	1	%	-	-	100	98
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibutylchloredate (surr.)	1	%	-	-	85	93
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Total Organic Carbon ^{M10}	0.1	%	-	-	4.7	0.5
% Moisture	0.1	%	19	16	18	14
Heavy Metals						
Arsenic	2	mg/kg	3.6	3.2	8.2	3.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.5	6.7	13	13
Copper	5	mg/kg	8.1	9.2	530	7.7
Lead	5	mg/kg	9.8	12	150	20
Mercury	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
Nickel	5	mg/kg	< 5	< 5	16	< 5
Zinc	5	mg/kg	< 5	< 5	220	< 5

Client Sample ID			BH12 6.5-7.0 Soil	QC01 Soil	QC02 Soil	QC03 Soil
Sample Matrix			S15-De06639	S15-De06640	S15-De06641	S15-De06642
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	-
2-Propanone (Acetone)	5	mg/kg	-	< 5	< 5	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	-
Allyl chloride	0.05	mg/kg	-	< 0.05	< 0.05	-
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	-

Client Sample ID			BH12 6.5-7.0 Soil	QC01 Soil	QC02 Soil	QC03 Soil
Sample Matrix			S15-De06639	S15-De06640	S15-De06641	S15-De06642
Eurofins mgt Sample No.			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	-
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	-
Fluorobenzene (surr.)	1	%	-	102	104	-
4-Bromofluorobenzene (surr.)	1	%	-	105	105	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	74	77	85	95
p-Terphenyl-d14 (surr.)	1	%	95	95	111	119
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-

Client Sample ID			BH12 6.5-7.0	QC01	QC02	QC03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S15-De06639	S15-De06640	S15-De06641	S15-De06642
Date Sampled			Dec 06, 2015	Dec 06, 2015	Dec 06, 2015	Dec 06, 2015
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	-	< 1	< 1	-
Dibutylchloredate (surr.)	1	%	-	92	107	-
Tetrachloro-m-xylene (surr.)	1	%	-	104	112	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibutylchloredate (surr.)	1	%	-	92	107	-
Tetrachloro-m-xylene (surr.)	1	%	-	104	112	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Total Organic Carbon ^{M10}	0.1	%	-	0.3	0.3	-
% Moisture	0.1	%	14	14	12	14
Heavy Metals						
Arsenic	2	mg/kg	3.6	9.5	54	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.0	32	19	< 5
Copper	5	mg/kg	< 5	< 5	6.5	< 5
Lead	5	mg/kg	< 5	6.6	< 5	< 5
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	< 5	< 5	< 5

Sample History

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

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 09, 2015	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 09, 2015	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 09, 2015	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Volatile Organics	Sydney	Dec 09, 2015	7 Day
- Method: E016 Volatile Organic Compounds (VOC)			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 09, 2015	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Organochlorine Pesticides	Sydney	Dec 09, 2015	14 Day
- Method: E013 Organochlorine Pesticides (OC)			
Polychlorinated Biphenyls	Sydney	Dec 09, 2015	28 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
Polychlorinated Biphenyls (PCB)	Sydney	Dec 09, 2015	28 Day
- Method: E013 Polychlorinated Biphenyls (PCB)			
pH (1:5 Aqueous extract)	Sydney	Dec 10, 2015	7 Day
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Dec 14, 2015	28 Day
- Method: APHA 5310B Total Organic Carbon			
Metals M8	Sydney	Dec 09, 2015	28 Day
- Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS			
Conductivity (1:5 aqueous extract at 25°C)	Melbourne	Dec 10, 2015	7 Day
- Method: LTM-INO-4030			
Ion Exchange Properties	Melbourne	Dec 10, 2015	
% Moisture	Sydney	Dec 07, 2015	14 Day
- Method: LTM-GEN-7080 Moisture			
SPOCAS Suite			
SPOCAS Suite	Brisbane	Dec 10, 2015	6 Week
- Method: LTM-GEN-7050			
Extraneous Material	Brisbane	Dec 10, 2015	6 Week
- Method: LTM-GEN-7050/7070			

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																
BH01 0.0-1.0	Dec 06, 2015		Soil	S15-De06582	X				X			X						X		X
BH01 1.0-2.0	Dec 06, 2015		Soil	S15-De06583					X			X						X		X
BH02 0.0-1.0	Dec 06, 2015		Soil	S15-De06584	X			X	X	X		X		X	X			X		X
BH03 0.0-1.0	Dec 06, 2015		Soil	S15-De06585	X			X	X	X		X		X	X			X		X
BH03 1.0-2.0	Dec 06, 2015		Soil	S15-De06586					X			X						X		X
BH04 0.0-1.0	Dec 06, 2015		Soil	S15-De06587	X		X	X	X	X		X		X	X			X	X	X
BH04 1.0-2.0	Dec 06, 2015		Soil	S15-De06588					X			X			X			X		X
BH04 2.0-4.0	Dec 06, 2015		Soil	S15-De06589					X			X						X		X
BH04 5.0-5.5	Dec 06, 2015		Soil	S15-De06590					X	X		X		X	X			X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH04 5.5-6.0	Dec 06, 2015		Soil	S15-De06591					X			X				X		X		X
BH05 0.0-0.1	Dec 06, 2015		Soil	S15-De06592	X		X	X	X	X		X		X	X			X	X	X
BH05 1.0-2.1	Dec 06, 2015		Soil	S15-De06593					X			X						X		X
BH05 2.0-3.0	Dec 06, 2015		Soil	S15-De06594		X														
BH06 0.0-0.5	Dec 06, 2015		Soil	S15-De06595	X			X	X	X		X		X	X			X		X
BH07 0.0-1.0	Dec 06, 2015		Soil	S15-De06596	X		X	X	X	X		X		X	X			X	X	X
BH07 1.0-1.5	Dec 06, 2015		Soil	S15-De06597					X			X				X		X		X
BH07 2.0-3.0	Dec 06, 2015		Soil	S15-De06598												X	X			
BH08 0.0-1.0	Dec 06, 2015		Soil	S15-De06599	X			X	X	X		X		X	X			X		X
BH08 1.0-2.0	Dec 06, 2015		Soil	S15-De06600					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH08 2.5-3.0	Dec 06, 2015		Soil	S15-De06601		X														
BH09 0.0-1.0	Dec 06, 2015		Soil	S15-De06602	X		X	X	X	X		X		X	X			X	X	X
BH09 1.0-2.0	Dec 06, 2015		Soil	S15-De06603					X			X						X		X
BH09 2.0-3.0	Dec 06, 2015		Soil	S15-De06604					X			X						X		X
BH09 3.0-4.0	Dec 06, 2015		Soil	S15-De06605			X		X			X						X	X	X
BH09 6.0-6.5	Dec 06, 2015		Soil	S15-De06606					X			X			X			X		X
BH09 8.0	Dec 06, 2015		Soil	S15-De06607												X	X			
BH10 0.0-1.0	Dec 06, 2015		Soil	S15-De06608	X			X	X	X		X		X	X			X		X
BH12 0.0-1.0	Dec 06, 2015		Soil	S15-De06609	X		X	X	X	X		X		X	X			X	X	X
BH12 1.0-2.0	Dec 06, 2015		Soil	S15-De06610					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH12 2.0-3.0	Dec 06, 2015		Soil	S15-De06611					X			X						X		X
BH12 3.0-4.0	Dec 06, 2015		Soil	S15-De06612					X			X						X		X
BH12 4.0-5.0	Dec 06, 2015		Soil	S15-De06613			X		X			X						X	X	X
BH12 5.0-6.0	Dec 06, 2015		Soil	S15-De06614		X														
BH13 0.0-1.0	Dec 06, 2015		Soil	S15-De06615	X		X	X	X	X		X		X	X			X	X	X
BH13 1.0-2.0	Dec 06, 2015		Soil	S15-De06616	X				X			X						X		X
BH13 3.0-3.5	Dec 06, 2015		Soil	S15-De06617		X														
BH14 0.3-1.0	Dec 06, 2015		Soil	S15-De06618	X			X	X	X		X		X	X			X		X
BH15 0.0-1.0	Dec 06, 2015		Soil	S15-De06619					X	X		X		X				X		X
BH15 1.0-2.0	Dec 06, 2015		Soil	S15-De06620					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH15 2.0-3.0	Dec 06, 2015		Soil	S15-De06621					X			X						X		X
BH15 3.0-3.6	Dec 06, 2015		Soil	S15-De06622		X														
BH16 0.0-1.0	Dec 06, 2015		Soil	S15-De06623	X			X	X	X		X		X	X			X		X
BH16 1.0-2.0	Dec 06, 2015		Soil	S15-De06624					X			X						X		X
BH16 2.0-3.0	Dec 06, 2015		Soil	S15-De06625					X			X						X		X
BH16 4.0-4.5	Dec 06, 2015		Soil	S15-De06626			X											X	X	
BH17 0.0-1.0	Dec 06, 2015		Soil	S15-De06627	X		X	X	X	X		X		X	X			X	X	X
BH17 1.0-2.0	Dec 06, 2015		Soil	S15-De06628					X			X						X		X
BH17 2.0-3.0	Dec 06, 2015		Soil	S15-De06629					X			X						X		X
BH17 4.0	Dec 06, 2015		Soil	S15-De06630		X														

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH17 6.0	Dec 06, 2015		Soil	S15-De06631		X														
BH18 0.0-1.0	Dec 06, 2015		Soil	S15-De06632	X			X	X	X		X		X	X			X		X
BH18 1.0-2.0	Dec 06, 2015		Soil	S15-De06633					X			X						X		X
BH18 2.0-3.0	Dec 06, 2015		Soil	S15-De06634					X			X						X		X
BH18 3.0-4.0	Dec 06, 2015		Soil	S15-De06635		X														
BH18 6.0	Dec 06, 2015		Soil	S15-De06636		X														
BH05 3.5-4.0	Dec 06, 2015		Soil	S15-De06637	X			X	X	X		X		X	X			X		X
BH07 3.0-4.0	Dec 06, 2015		Soil	S15-De06638	X			X	X	X		X		X	X			X		X
BH12 6.5-7.0	Dec 06, 2015		Soil	S15-De06639					X			X						X		X
QC01	Dec 06, 2015		Soil	S15-De06640	X			X	X	X	X	X			X			X		X

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Laboratory where analysis is conducted																			
Melbourne Laboratory - NATA Site # 1254 & 14271								X										X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X
Brisbane Laboratory - NATA Site # 20794															X	X	X	X	
External Laboratory																			
QC02	Dec 06, 2015		Soil	S15-De06641	X			X	X	X	X	X			X			X	X
QC03	Dec 06, 2015		Soil	S15-De06642					X			X						X	X
RINSATE	Dec 06, 2015		Water	S15-De06643					X	X		X		X	X				X
TS	Dec 06, 2015		Water	S15-De06644									X						
SB	Dec 06, 2015		Water	S15-De06645									X						

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the Sample Receipt Advice.

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC Data General Comments

1. Where a result is reported as a 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 is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 5			5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.05			0.05	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1,2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1,3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	
α-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
β-BHC	mg/kg	< 0.05			0.05	Pass	
δ-BHC	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	
γ-BHC (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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C)	uS/cm	< 10			10	Pass	
Total Organic Carbon	%	< 0.1			0.1	Pass	
Method Blank							
Ion Exchange Properties							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	95			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethane	%	77			70-130	Pass	
1.1-Dichloroethene	%	103			70-130	Pass	
1.1.1-Trichloroethane	%	99			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	99			70-130	Pass	
1.1.2-Trichloroethane	%	100			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	103			70-130	Pass	
1.2-Dibromoethane	%	99			70-130	Pass	
1.2-Dichlorobenzene	%	97			70-130	Pass	
1.2-Dichloroethane	%	98			70-130	Pass	
1.2-Dichloropropane	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.2.3-Trichloropropane	%	104			70-130	Pass	
1.2.4-Trimethylbenzene	%	93			70-130	Pass	
1.3-Dichlorobenzene	%	95			70-130	Pass	
1.3-Dichloropropane	%	99			70-130	Pass	
1.3.5-Trimethylbenzene	%	93			70-130	Pass	
1.4-Dichlorobenzene	%	95			70-130	Pass	
2-Butanone (MEK)	%	103			70-130	Pass	
2-Propanone (Acetone)	%	115			70-130	Pass	
4-Chlorotoluene	%	93			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	%	101			70-130	Pass	
Allyl chloride	%	97			75-125	Pass	
Benzene	%	98			70-130	Pass	
Bromobenzene	%	95			70-130	Pass	
Bromochloromethane	%	98			70-130	Pass	
Bromodichloromethane	%	97			70-130	Pass	
Bromoform	%	102			70-130	Pass	
Bromomethane	%	81			70-130	Pass	
Carbon disulfide	%	104			70-130	Pass	
Carbon Tetrachloride	%	96			70-130	Pass	
Chlorobenzene	%	98			70-130	Pass	
Chloroform	%	97			70-130	Pass	
Chloromethane	%	118			70-130	Pass	
cis-1.2-Dichloroethene	%	99			70-130	Pass	
cis-1.3-Dichloropropene	%	93			70-130	Pass	
Dibromochloromethane	%	98			70-130	Pass	
Dibromomethane	%	99			70-130	Pass	
Dichlorodifluoromethane	%	119			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
Iodomethane	%	112			70-130	Pass	
Isopropyl benzene (Cumene)	%	96			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
Methylene Chloride	%	119			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Styrene	%	96			70-130	Pass	
Tetrachloroethene	%	93			70-130	Pass	
Toluene	%	97			70-130	Pass	
trans-1.2-Dichloroethene	%	101			70-130	Pass	
trans-1.3-Dichloropropene	%	93			70-130	Pass	
Trichloroethene	%	95			70-130	Pass	
Trichlorofluoromethane	%	92			70-130	Pass	
Vinyl chloride	%	118			70-130	Pass	
Xylenes - Total	%	80			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	94			70-130	Pass	
TRH C6-C10	%	97			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	87			70-130	Pass	
Acenaphthylene	%	83			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	87			70-130	Pass	
Benzo(a)pyrene	%	75			70-130	Pass	
Benzo(b&j)fluoranthene	%	73			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g,h,i)perylene	%	88			70-130	Pass	
Benzo(k)fluoranthene	%	84			70-130	Pass	
Chrysene	%	86			70-130	Pass	
Dibenz(a,h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	96			70-130	Pass	
Fluorene	%	80			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	73			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	109			70-130	Pass	
Pyrene	%	96			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	89			70-130	Pass	
4,4'-DDD	%	90			70-130	Pass	
4,4'-DDE	%	89			70-130	Pass	
4,4'-DDT	%	82			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	92			70-130	Pass	
b-BHC	%	89			70-130	Pass	
d-BHC	%	95			70-130	Pass	
Dieldrin	%	90			70-130	Pass	
Endosulfan I	%	92			70-130	Pass	
Endosulfan II	%	92			70-130	Pass	
Endosulfan sulphate	%	97			70-130	Pass	
Endrin	%	89			70-130	Pass	
Endrin aldehyde	%	98			70-130	Pass	
Endrin ketone	%	96			70-130	Pass	
g-BHC (Lindane)	%	90			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	88			70-130	Pass	
Hexachlorobenzene	%	88			70-130	Pass	
Methoxychlor	%	95			70-130	Pass	
Toxaphene	%	95			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	100			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	80			70-130	Pass	
LCS - % Recovery							
Total Organic Carbon	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	104			70-130	Pass	
Cadmium	%	95			70-130	Pass	
Chromium	%	96			70-130	Pass	
Copper	%	98			70-130	Pass	
Lead	%	104			70-130	Pass	
Mercury	%	101			70-130	Pass	
Nickel	%	96			70-130	Pass	
Zinc	%	105			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De06583	CP	%	122			70-130	Pass	
Cadmium	S15-De06583	CP	%	106			70-130	Pass	
Chromium	S15-De06583	CP	%	101			70-130	Pass	
Copper	S15-De06583	CP	%	85			70-130	Pass	
Mercury	S15-De06583	CP	%	71			70-130	Pass	
Nickel	S15-De06583	CP	%	117			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S15-De06888	NCP	%	82			70-130	Pass	
4,4'-DDD	S15-De06888	NCP	%	100			70-130	Pass	
4,4'-DDE	S15-De06888	NCP	%	86			70-130	Pass	
4,4'-DDT	S15-De06888	NCP	%	71			70-130	Pass	
a-BHC	S15-De06888	NCP	%	81			70-130	Pass	
Aldrin	S15-De06888	NCP	%	73			70-130	Pass	
b-BHC	S15-De06888	NCP	%	80			70-130	Pass	
d-BHC	S15-De06888	NCP	%	83			70-130	Pass	
Dieldrin	S15-De06888	NCP	%	86			70-130	Pass	
Endosulfan I	S15-De06888	NCP	%	85			70-130	Pass	
Endosulfan II	S15-De06888	NCP	%	86			70-130	Pass	
Endosulfan sulphate	S15-De06888	NCP	%	90			70-130	Pass	
Endrin	S15-De06888	NCP	%	87			70-130	Pass	
Endrin aldehyde	S15-De06888	NCP	%	96			70-130	Pass	
Endrin ketone	S15-De06888	NCP	%	93			70-130	Pass	
g-BHC (Lindane)	S15-De06888	NCP	%	80			70-130	Pass	
Heptachlor	S15-De06888	NCP	%	91			70-130	Pass	
Heptachlor epoxide	S15-De06888	NCP	%	76			70-130	Pass	
Hexachlorobenzene	S15-De06888	NCP	%	80			70-130	Pass	
Methoxychlor	S15-De06888	NCP	%	94			70-130	Pass	
Toxaphene	S15-De06888	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S15-De06888	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S15-De06888	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S15-De06589	CP	%	71			70-130	Pass	
TRH C10-C14	S15-De06589	CP	%	100			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	S15-De06589	CP	%	80			70-130	Pass	
Ethylbenzene	S15-De06589	CP	%	77			70-130	Pass	
m&p-Xylenes	S15-De06589	CP	%	80			70-130	Pass	
o-Xylene	S15-De06589	CP	%	80			70-130	Pass	
Toluene	S15-De06589	CP	%	78			70-130	Pass	
Xylenes - Total	S15-De06589	CP	%	80			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S15-De06589	CP	%	84			70-130	Pass	
TRH C6-C10	S15-De06589	CP	%	72			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S15-De06589	CP	%	99			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S15-De06593	CP	%	74			70-130	Pass	
Acenaphthylene	S15-De06593	CP	%	75			70-130	Pass	
Anthracene	S15-De06593	CP	%	85			70-130	Pass	
Benz(a)anthracene	S15-De06593	CP	%	100			70-130	Pass	
Benzo(a)pyrene	S15-De06593	CP	%	91			70-130	Pass	
Benzo(b&j)fluoranthene	S15-De06593	CP	%	86			70-130	Pass	
Benzo(g,h,i)perylene	S15-De06593	CP	%	77			70-130	Pass	
Benzo(k)fluoranthene	S15-De06593	CP	%	82			70-130	Pass	
Chrysene	S15-De06593	CP	%	87			70-130	Pass	
Dibenz(a,h)anthracene	S15-De06593	CP	%	71			70-130	Pass	
Fluoranthene	S15-De06593	CP	%	77			70-130	Pass	
Fluorene	S15-De06593	CP	%	72			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S15-De06593	CP	%	73			70-130	Pass	
Naphthalene	S15-De06593	CP	%	83			70-130	Pass	
Phenanthrene	S15-De06593	CP	%	87			70-130	Pass	
Pyrene	S15-De06593	CP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De06593	CP	%	99			70-130	Pass	
Cadmium	S15-De06593	CP	%	104			70-130	Pass	
Mercury	S15-De06593	CP	%	93			70-130	Pass	
Nickel	S15-De06593	CP	%	77			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De06606	CP	%	116			70-130	Pass	
Cadmium	S15-De06606	CP	%	108			70-130	Pass	
Chromium	S15-De06606	CP	%	98			70-130	Pass	
Copper	S15-De06606	CP	%	115			70-130	Pass	
Mercury	S15-De06606	CP	%	98			70-130	Pass	
Nickel	S15-De06606	CP	%	106			70-130	Pass	
Zinc	S15-De06606	CP	%	114			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De06608	CP	%	86			70-130	Pass	
Cadmium	S15-De06608	CP	%	94			70-130	Pass	
Chromium	S15-De06608	CP	%	71			70-130	Pass	
Mercury	S15-De06608	CP	%	72			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S15-De06612	CP	%	95			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	S15-De06612	CP	%	90			70-130	Pass	
Ethylbenzene	S15-De06612	CP	%	96			70-130	Pass	
m&p-Xylenes	S15-De06612	CP	%	100			70-130	Pass	
o-Xylene	S15-De06612	CP	%	101			70-130	Pass	
Toluene	S15-De06612	CP	%	95			70-130	Pass	
Xylenes - Total	S15-De06612	CP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	S15-De06612	CP	%	126			70-130	Pass	
TRH C6-C10	S15-De06612	CP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S15-De06613	CP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S15-De06613	CP	%	82			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S15-De06618	CP	%	81			70-130	Pass	
Acenaphthylene	S15-De06618	CP	%	76			70-130	Pass	
Anthracene	S15-De06618	CP	%	80			70-130	Pass	
Benz(a)anthracene	S15-De06618	CP	%	76			70-130	Pass	
Benzo(a)pyrene	S15-De06618	CP	%	77			70-130	Pass	
Benzo(b&j)fluoranthene	S15-De06618	CP	%	72			70-130	Pass	
Benzo(g,h,i)perylene	S15-De06618	CP	%	81			70-130	Pass	
Benzo(k)fluoranthene	S15-De06618	CP	%	75			70-130	Pass	
Chrysene	S15-De06618	CP	%	72			70-130	Pass	
Dibenz(a,h)anthracene	S15-De06618	CP	%	79			70-130	Pass	
Fluoranthene	S15-De06618	CP	%	81			70-130	Pass	
Fluorene	S15-De06618	CP	%	74			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S15-De06618	CP	%	81			70-130	Pass	
Naphthalene	S15-De06618	CP	%	80			70-130	Pass	
Phenanthrene	S15-De06618	CP	%	91			70-130	Pass	
Pyrene	S15-De06618	CP	%	82			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S15-De06619	CP	%	105			70-130	Pass	
Cadmium	S15-De06619	CP	%	102			70-130	Pass	
Chromium	S15-De06619	CP	%	90			70-130	Pass	
Mercury	S15-De06619	CP	%	113			70-130	Pass	
Nickel	S15-De06619	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S15-De06627	CP	%	77			70-130	Pass	
TRH C10-C14	S15-De06627	CP	%	98			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
Benzene	S15-De06627	CP	%	75			70-130	Pass	
Ethylbenzene	S15-De06627	CP	%	79			70-130	Pass	
m&p-Xylenes	S15-De06627	CP	%	82			70-130	Pass	
o-Xylene	S15-De06627	CP	%	85			70-130	Pass	
Toluene	S15-De06627	CP	%	78			70-130	Pass	
Xylenes - Total	S15-De06627	CP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S15-De06627	CP	%	98			70-130	Pass	
TRH C6-C10	S15-De06627	CP	%	78			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S15-De06627	CP	%	102			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1-Dichloroethane	S15-De06632	CP	%	86			70-130	Pass	
1.1-Dichloroethene	S15-De06632	CP	%	84			70-130	Pass	
1.1.1-Trichloroethane	S15-De06632	CP	%	91			70-130	Pass	
1.1.1.2-Tetrachloroethane	S15-De06632	CP	%	94			70-130	Pass	
1.1.2-Trichloroethane	S15-De06632	CP	%	88			70-130	Pass	
1.1.2.2-Tetrachloroethane	S15-De06632	CP	%	90			70-130	Pass	
1.2-Dibromoethane	S15-De06632	CP	%	85			70-130	Pass	
1.2-Dichlorobenzene	S15-De06632	CP	%	87			70-130	Pass	
1.2-Dichloroethane	S15-De06632	CP	%	89			70-130	Pass	
1.2-Dichloropropane	S15-De06632	CP	%	89			70-130	Pass	
1.2.3-Trichloropropane	S15-De06632	CP	%	89			70-130	Pass	
1.2.4-Trimethylbenzene	S15-De06632	CP	%	86			70-130	Pass	
1.3-Dichlorobenzene	S15-De06632	CP	%	86			70-130	Pass	
1.3-Dichloropropane	S15-De06632	CP	%	87			70-130	Pass	
1.3.5-Trimethylbenzene	S15-De06632	CP	%	86			70-130	Pass	
1.4-Dichlorobenzene	S15-De06632	CP	%	86			70-130	Pass	
2-Butanone (MEK)	S15-De06632	CP	%	98			70-130	Pass	
2-Propanone (Acetone)	S15-De06632	CP	%	87			70-130	Pass	
4-Chlorotoluene	S15-De06632	CP	%	86			70-130	Pass	
4-Methyl-2-pentanone (MIBK)	S15-De06632	CP	%	87			70-130	Pass	
Allyl chloride	S15-De06632	CP	%	81			75-125	Pass	
Benzene	S15-De06632	CP	%	89			70-130	Pass	
Bromobenzene	S15-De06632	CP	%	86			70-130	Pass	
Bromochloromethane	S15-De06632	CP	%	90			70-130	Pass	
Bromodichloromethane	S15-De06632	CP	%	88			70-130	Pass	
Bromoform	S15-De06632	CP	%	89			70-130	Pass	
Bromomethane	S15-De06632	CP	%	90			70-130	Pass	
Carbon disulfide	S15-De06632	CP	%	82			70-130	Pass	
Carbon Tetrachloride	S15-De06632	CP	%	88			70-130	Pass	
Chlorobenzene	S15-De06632	CP	%	91			70-130	Pass	
Chloroform	S15-De06632	CP	%	89			70-130	Pass	
Chloromethane	S15-De06632	CP	%	96			70-130	Pass	
cis-1.2-Dichloroethene	S15-De06632	CP	%	91			70-130	Pass	
cis-1.3-Dichloropropene	S15-De06632	CP	%	82			70-130	Pass	
Dibromochloromethane	S15-De06632	CP	%	84			70-130	Pass	
Dibromomethane	S15-De06632	CP	%	86			70-130	Pass	
Dichlorodifluoromethane	S15-De06632	CP	%	111			70-130	Pass	
Ethylbenzene	S15-De06632	CP	%	90			70-130	Pass	
Iodomethane	S15-De06632	CP	%	92			70-130	Pass	
Isopropyl benzene (Cumene)	S15-De06632	CP	%	89			70-130	Pass	
m&p-Xylenes	S15-De06632	CP	%	89			70-130	Pass	
Methylene Chloride	S15-De06632	CP	%	95			70-130	Pass	
o-Xylene	S15-De06632	CP	%	90			70-130	Pass	
Styrene	S15-De06632	CP	%	86			70-130	Pass	
Tetrachloroethene	S15-De06632	CP	%	86			70-130	Pass	
Toluene	S15-De06632	CP	%	87			70-130	Pass	
trans-1.2-Dichloroethene	S15-De06632	CP	%	89			70-130	Pass	
trans-1.3-Dichloropropene	S15-De06632	CP	%	82			70-130	Pass	
Trichloroethene	S15-De06632	CP	%	87			70-130	Pass	
Vinyl chloride	S15-De06632	CP	%	99			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S15-De06632	CP	%	93			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1					
Arsenic	S15-De06633	CP	%	97			70-130	Pass	
Cadmium	S15-De06633	CP	%	106			70-130	Pass	
Chromium	S15-De06633	CP	%	100			70-130	Pass	
Copper	S15-De06633	CP	%	97			70-130	Pass	
Lead	S15-De06633	CP	%	84			70-130	Pass	
Mercury	S15-De06633	CP	%	97			70-130	Pass	
Nickel	S15-De06633	CP	%	102			70-130	Pass	
Zinc	S15-De06633	CP	%	112			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S15-De06582	CP	mg/kg	11	13	13	30%	Pass	
Cadmium	S15-De06582	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S15-De06582	CP	mg/kg	5.6	6.5	14	30%	Pass	
Copper	S15-De06582	CP	mg/kg	590	510	14	30%	Pass	
Lead	S15-De06582	CP	mg/kg	240	200	20	30%	Pass	
Mercury	S15-De06582	CP	mg/kg	0.24	0.19	21	30%	Pass	
Nickel	S15-De06582	CP	mg/kg	12	11	9.0	30%	Pass	
Zinc	S15-De06582	CP	mg/kg	210	180	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C)	S15-De09294	NCP	uS/cm	52	50	4.0	30%	Pass	
pH (1:5 Aqueous extract)	S15-De06587	CP	pH Units	8.1	8.2	pass	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S15-De06588	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S15-De06588	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S15-De06588	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S15-De06588	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Benzene	S15-De06588	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S15-De06588	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S15-De06588	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S15-De06588	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S15-De06588	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S15-De06588	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S15-De06588	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S15-De06588	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S15-De06588	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S15-De06588	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S15-De06588	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(a)pyrene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S15-De06591	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
SPOCAS Suite				Result 1	Result 2	RPD		
pH-KCL	S15-De06591	CP	pH Units	4.6	4.6	<1	30%	Pass
pH-OX	S15-De06591	CP	pH Units	5.1	5.1	1.0	30%	Pass
Acid trail - Titratable Actual Acidity	S15-De06591	CP	mol H+/t	29	29	<1	30%	Pass
Acid trail - Titratable Peroxide Acidity	S15-De06591	CP	mol H+/t	60	60	1.0	30%	Pass
Acid trail - Titratable Sulfidic Acidity	S15-De06591	CP	mol H+/t	31	32	2.0	30%	Pass
sulfidic - TAA equiv. S% pyrite	S15-De06591	CP	% pyrite S	0.05	0.05	<1	30%	Pass
sulfidic - TPA equiv. S% pyrite	S15-De06591	CP	% pyrite S	0.10	0.10	1.0	30%	Pass
sulfidic - TSA equiv. S% pyrite	S15-De06591	CP	% pyrite S	0.05	0.05	2.0	30%	Pass
Sulfur - KCl Extractable	S15-De06591	CP	% S	< 0.02	< 0.02	<1	30%	Pass
Sulfur - Peroxide	S15-De06591	CP	% S	< 0.02	< 0.02	<1	30%	Pass
Sulfur - Peroxide Oxidisable Sulfur	S15-De06591	CP	% S	< 0.02	< 0.02	<1	30%	Pass
acidity - Peroxide Oxidisable Sulfur	S15-De06591	CP	mol H+/t	< 10	< 10	<1	30%	Pass
HCl Extractable Sulfur	S15-De06591	CP	% S	n/a	n/a	n/a	30%	Pass
Net Acid soluble sulfur	S15-De06591	CP	% S	n/a	n/a	n/a	30%	Pass
Net Acid soluble sulfur - acidity units	S15-De06591	CP	mol H+/t	n/a	n/a	n/a	30%	Pass
Net Acid soluble sulfur - equivalent S% pyrite	S15-De06591	CP	% S	n/a	n/a	n/a	30%	Pass
Calcium - KCl Extractable	S15-De06591	CP	% Ca	< 0.02	< 0.02	<1	30%	Pass
Calcium - Peroxide	S15-De06591	CP	% Ca	< 0.02	< 0.02	<1	30%	Pass
Acid Reacted Calcium	S15-De06591	CP	% Ca	< 0.02	< 0.02	<1	30%	Pass
acidity - Acid Reacted Calcium	S15-De06591	CP	mol H+/t	< 10	< 10	<1	30%	Pass
sulfidic - Acid Reacted Ca equiv. S% pyrite	S15-De06591	CP	% S	< 0.02	< 0.02	<1	30%	Pass
Magnesium - KCl Extractable	S15-De06591	CP	% Mg	0.04	0.04	3.0	30%	Pass
Magnesium - Peroxide	S15-De06591	CP	% Mg	0.04	0.04	1.0	30%	Pass
Acid Reacted Magnesium	S15-De06591	CP	% Mg	< 0.02	< 0.02	<1	30%	Pass
acidity - Acid Reacted Magnesium	S15-De06591	CP	mol H+/t	< 10	< 10	<1	30%	Pass
sulfidic - Acid Reacted Mg equiv. S% pyrite	S15-De06591	CP	% S	< 0.02	< 0.02	<1	30%	Pass
Acid Neutralising Capacity	S15-De06591	CP	%CaCO3	n/a	n/a	n/a	30%	Pass
Acid Neutralising Capacity - Acidity units	S15-De06591	CP	mol H+/t	n/a	n/a	n/a	30%	Pass
ANC Fineness Factor	S15-De06591	CP	factor	1.5	1.5	<1	30%	Pass
Net Acidity (sulfur units) - SPOCAS	S15-De06591	CP	% S	0.05	0.05	<1	30%	Pass
Net Acidity (acidity units) - SPOCAS	S15-De06591	CP	mol H+/t	29	29	<1	30%	Pass
Liming rate - SPOCAS	S15-De06591	CP	kg CaCO3/t	2.0	2.0	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S15-De06592	CP	%	9.3	8.0	16	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S15-De06592	CP	mg/kg	2.4	2.7	10	30%	Pass
Cadmium	S15-De06592	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S15-De06592	CP	mg/kg	9.7	8.7	11	30%	Pass
Copper	S15-De06592	CP	mg/kg	55	56	1.0	30%	Pass
Lead	S15-De06592	CP	mg/kg	110	110	8.0	30%	Pass
Mercury	S15-De06592	CP	mg/kg	0.09	0.09	11	30%	Pass
Nickel	S15-De06592	CP	mg/kg	< 5	6.0	<1	30%	Pass
Zinc	S15-De06592	CP	mg/kg	69	75	8.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S15-De06600	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	S15-De06600	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S15-De06600	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S15-De06600	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Benzene	S15-De06600	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S15-De06600	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S15-De06600	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	S15-De06600	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S15-De06600	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	S15-De06600	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S15-De06600	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S15-De06600	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	S15-De06600	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S15-De06600	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S15-De06600	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S15-De06604	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S15-De06605	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S15-De06605	CP	%	13	14	2.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S15-De06605	CP	mg/kg	2.8	2.9	5.0	30%	Pass
Cadmium	S15-De06605	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S15-De06605	CP	mg/kg	10	11	3.0	30%	Pass
Copper	S15-De06605	CP	mg/kg	6.9	5.9	16	30%	Pass
Lead	S15-De06605	CP	mg/kg	15	13	13	30%	Pass
Mercury	S15-De06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S15-De06605	CP	mg/kg	< 5	< 5	<1	30%	Pass
Zinc	S15-De06605	CP	mg/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,1-Dichloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1-Dichloroethene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1-Trichloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,1,2-Tetrachloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2-Trichloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,1,2,2-Tetrachloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dibromoethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichlorobenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2-Dichloropropane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichloropropane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trimethylbenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichloropropane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3,5-Trimethylbenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S15-De06608	CP	mg/kg	< 5	< 5	<1	30%	Pass
4-Chlorotoluene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S15-De06608	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromobenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Bromodichloromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,2-Dichloroethene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S15-De06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S15-De06612	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Benzene	S15-De06612	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S15-De06612	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S15-De06612	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	S15-De06612	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S15-De06612	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	S15-De06612	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S15-De06612	CP	mg/kg	0.7	0.6	10	30%	Pass
TRH C6-C10	S15-De06612	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S15-De06618	CP	mg/kg	2.3	2.2	<1	30%	Pass
Cadmium	S15-De06618	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S15-De06618	CP	mg/kg	14	15	2.0	30%	Pass
Copper	S15-De06618	CP	mg/kg	150	150	5.0	30%	Pass
Lead	S15-De06618	CP	mg/kg	88	88	<1	30%	Pass
Mercury	S15-De06618	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S15-De06618	CP	mg/kg	7.8	8.0	2.0	30%	Pass
Zinc	S15-De06618	CP	mg/kg	100	100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Total Organic Carbon	S15-De06623	CP	%	1.6	1.5	6.0	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C10-C14	S15-De06625	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S15-De06625	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S15-De06625	CP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	S15-De06625	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S15-De06625	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S15-De06625	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S15-De06625	CP	%	15	14	5.0	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S15-De06627	CP	mg/kg	< 5	< 5	<1	30%	Pass
4-Chlorotoluene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S15-De06627	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bromobenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Tetrachloroethene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,2-Dichloroethene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S15-De06627	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S15-De06629	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S15-De06632	CP	mg/kg	4.8	5.5	13	30%	Pass
Cadmium	S15-De06632	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S15-De06632	CP	mg/kg	8.3	9.3	11	30%	Pass
Copper	S15-De06632	CP	mg/kg	140	170	19	30%	Pass
Lead	S15-De06632	CP	mg/kg	88	99	12	30%	Pass
Mercury	S15-De06632	CP	mg/kg	0.08	0.08	7.0	30%	Pass
Nickel	S15-De06632	CP	mg/kg	8.2	9.2	11	30%	Pass
Zinc	S15-De06632	CP	mg/kg	130	140	6.0	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S15-De06638	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Hexachlorobenzene	S15-De06638	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S15-De06638	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S15-De06638	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1221	S15-De06638	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S15-De06638	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S15-De06639	CP	%	14	13	5.0	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1221	S15-De08184	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Total Organic Carbon	S15-De06640	CP	%	0.3	0.3	8.0	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
M10	NATA accreditation does not cover the performance of this service in soil matrices
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
S02	Retained Acidity is Reported when the pHKCl is less than pH 4.5

Authorised By

Charl Du Preez	Analytical Services Manager
Bob Symons	Senior Analyst-Inorganic (NSW)
Bryan Wilson	Senior Analyst-Metal (QLD)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Ivan Taylor	Senior Analyst-Metal (NSW)
Rhys Thomas	Senior Analyst-Asbestos (NSW)
Richard Corner	Senior Analyst-Inorganic (QLD)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
 The results of the tests, calibrations and/or
 measurements included in this document are
 traceable to Australian/national standards.

JBS & G Australia (NSW & WA) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: Nathan Cussen
Report 482392-AID
Project Name ATP
Project ID 50720
Received Date Dec 07, 2015
Date Reported Dec 14, 2015

Methodology:

Asbestos ID	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. Bulk samples include building materials, soils and ores.
Subsampling Soil Samples	The whole sample submitted is first dried and then sieved through a 10mm sieve followed by a 2mm sieve. All fibrous matter viz greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) Iron ores - Sampling and Sample preparation procedures is employed. Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis in accordance with AS 4964-2004.
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated and where required interfering organic fibres or matter may be removed by treating the sample for several hours at a temperature not exceeding 400 ± 30°C. The resultant material is then ground and examined in accordance with AS 4964-2004.
Limit of Reporting	The nominal detection limit of the AS4964 method is around 0.01%. The examination of large sample sizes (at least 500 ml is recommended) may improve the likelihood of identifying asbestos material in the greater than 2 mm fraction. The NEPM screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. NOTE: NATA News, September 2011 – page 34, states, "Weighing of fibres is problematic and can lead to loss of fibres and potential exposure for laboratory analysts. To request laboratories to report information which is outside the scope of AS 4964-2004 and the scope of their accreditation is misleading and is most unwise" therefore such values reported are outside the scope of Eurofins mgt NATA accreditation as designated by an asterisk.

Project Name ATP
Project ID 50720
Date Sampled Dec 06, 2015
Report 482392-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
BH01 0.0-1.0	15-De06582	Dec 06, 2015	Approximate Sample 38g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH02 0.0-1.0	15-De06584	Dec 06, 2015	Approximate Sample 35g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH03 0.0-1.0	15-De06585	Dec 06, 2015	Approximate Sample 32g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH04 0.0-1.0	15-De06587	Dec 06, 2015	Approximate Sample 31g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH05 0.0-0.1	15-De06592	Dec 06, 2015	Approximate Sample 35g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH06 0.0-0.5	15-De06595	Dec 06, 2015	Approximate Sample 27g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH07 0.0-1.0	15-De06596	Dec 06, 2015	Approximate Sample 38g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH08 0.0-1.0	15-De06599	Dec 06, 2015	Approximate Sample 70g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH09 0.0-1.0	15-De06602	Dec 06, 2015	Approximate Sample 74g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH10 0.0-1.0	15-De06608	Dec 06, 2015	Approximate Sample 37g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
BH12 0.0-1.0	15-De06609	Dec 06, 2015	Approximate Sample 32g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH13 0.0-1.0	15-De06615	Dec 06, 2015	Approximate Sample 36g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH13 1.0-2.0	15-De06616	Dec 06, 2015	Approximate Sample 47g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH14 0.3-1.0	15-De06618	Dec 06, 2015	Approximate Sample 78g Sample consisted of: Grey fine grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH16 0.0-1.0	15-De06623	Dec 06, 2015	Approximate Sample 38g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH17 0.0-1.0	15-De06627	Dec 06, 2015	Approximate Sample 45g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH18 0.0-1.0	15-De06632	Dec 06, 2015	Approximate Sample 47g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH05 3.5-4.0	15-De06637	Dec 06, 2015	Approximate Sample 55g Sample consisted of: Brown coarse grain soil and rocks	No asbestos detected. Organic fibre detected. No respirable fibres detected.
BH07 3.0-4.0	15-De06638	Dec 06, 2015	Approximate Sample 37g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
QC01	15-De06640	Dec 06, 2015	Approximate Sample 24g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.
QC02	15-De06641	Dec 06, 2015	Approximate Sample 24g Sample consisted of: Brown coarse grain soil	No asbestos detected. Organic fibre detected. No respirable fibres detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Asbestos - LTM-ASB-8020	Sydney	Dec 07, 2015	Indefinite

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																
BH01 0.0-1.0	Dec 06, 2015		Soil	S15-De06582	X				X			X						X		X
BH01 1.0-2.0	Dec 06, 2015		Soil	S15-De06583					X			X						X		X
BH02 0.0-1.0	Dec 06, 2015		Soil	S15-De06584	X			X	X	X		X		X	X			X		X
BH03 0.0-1.0	Dec 06, 2015		Soil	S15-De06585	X			X	X	X		X		X	X			X		X
BH03 1.0-2.0	Dec 06, 2015		Soil	S15-De06586					X			X						X		X
BH04 0.0-1.0	Dec 06, 2015		Soil	S15-De06587	X		X	X	X	X		X		X	X			X	X	X
BH04 1.0-2.0	Dec 06, 2015		Soil	S15-De06588					X			X			X			X		X
BH04 2.0-4.0	Dec 06, 2015		Soil	S15-De06589					X			X						X		X
BH04 5.0-5.5	Dec 06, 2015		Soil	S15-De06590					X	X		X		X	X			X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794															X	X	X	X		
External Laboratory																				
BH04 5.5-6.0	Dec 06, 2015		Soil	S15-De06591					X			X				X		X		X
BH05 0.0-0.1	Dec 06, 2015		Soil	S15-De06592	X		X	X	X	X		X		X	X			X	X	X
BH05 1.0-2.1	Dec 06, 2015		Soil	S15-De06593					X			X						X		X
BH05 2.0-3.0	Dec 06, 2015		Soil	S15-De06594		X														
BH06 0.0-0.5	Dec 06, 2015		Soil	S15-De06595	X			X	X	X		X		X	X			X		X
BH07 0.0-1.0	Dec 06, 2015		Soil	S15-De06596	X		X	X	X	X		X		X	X			X	X	X
BH07 1.0-1.5	Dec 06, 2015		Soil	S15-De06597					X			X				X		X		X
BH07 2.0-3.0	Dec 06, 2015		Soil	S15-De06598												X	X			
BH08 0.0-1.0	Dec 06, 2015		Soil	S15-De06599	X			X	X	X		X		X	X			X		X
BH08 1.0-2.0	Dec 06, 2015		Soil	S15-De06600					X			X						X		X

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X											X	
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH08 2.5-3.0	Dec 06, 2015		Soil	S15-De06601		X														
BH09 0.0-1.0	Dec 06, 2015		Soil	S15-De06602	X		X	X	X	X		X		X	X			X	X	X
BH09 1.0-2.0	Dec 06, 2015		Soil	S15-De06603					X			X						X		X
BH09 2.0-3.0	Dec 06, 2015		Soil	S15-De06604					X			X						X		X
BH09 3.0-4.0	Dec 06, 2015		Soil	S15-De06605			X		X			X						X	X	X
BH09 6.0-6.5	Dec 06, 2015		Soil	S15-De06606					X			X			X			X		X
BH09 8.0	Dec 06, 2015		Soil	S15-De06607												X	X			
BH10 0.0-1.0	Dec 06, 2015		Soil	S15-De06608	X			X	X	X		X		X	X			X		X
BH12 0.0-1.0	Dec 06, 2015		Soil	S15-De06609	X		X	X	X	X		X		X	X			X	X	X
BH12 1.0-2.0	Dec 06, 2015		Soil	S15-De06610					X			X						X		X

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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH12 2.0-3.0	Dec 06, 2015		Soil	S15-De06611					X			X						X		X
BH12 3.0-4.0	Dec 06, 2015		Soil	S15-De06612					X			X						X		X
BH12 4.0-5.0	Dec 06, 2015		Soil	S15-De06613			X		X			X						X	X	X
BH12 5.0-6.0	Dec 06, 2015		Soil	S15-De06614		X														
BH13 0.0-1.0	Dec 06, 2015		Soil	S15-De06615	X		X	X	X	X		X		X	X			X	X	X
BH13 1.0-2.0	Dec 06, 2015		Soil	S15-De06616	X				X			X						X		X
BH13 3.0-3.5	Dec 06, 2015		Soil	S15-De06617		X														
BH14 0.3-1.0	Dec 06, 2015		Soil	S15-De06618	X			X	X	X		X		X	X			X		X
BH15 0.0-1.0	Dec 06, 2015		Soil	S15-De06619					X	X		X		X				X		X
BH15 1.0-2.0	Dec 06, 2015		Soil	S15-De06620					X			X						X		X

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: ATP
Project ID: 50720

Order No.:
Report #: 482392
Phone: 02 8245 0300
Fax:

Received: Dec 7, 2015 4:42 PM
Due: Dec 14, 2015
Priority: 5 Day
Contact Name: Nathan Cussen

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH15 2.0-3.0	Dec 06, 2015		Soil	S15-De06621					X			X						X		X
BH15 3.0-3.6	Dec 06, 2015		Soil	S15-De06622		X														
BH16 0.0-1.0	Dec 06, 2015		Soil	S15-De06623	X			X	X	X		X		X	X			X		X
BH16 1.0-2.0	Dec 06, 2015		Soil	S15-De06624					X			X						X		X
BH16 2.0-3.0	Dec 06, 2015		Soil	S15-De06625					X			X						X		X
BH16 4.0-4.5	Dec 06, 2015		Soil	S15-De06626			X											X	X	
BH17 0.0-1.0	Dec 06, 2015		Soil	S15-De06627	X		X	X	X	X		X		X	X			X	X	X
BH17 1.0-2.0	Dec 06, 2015		Soil	S15-De06628					X			X						X		X
BH17 2.0-3.0	Dec 06, 2015		Soil	S15-De06629					X			X						X		X
BH17 4.0	Dec 06, 2015		Soil	S15-De06630		X														

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Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
BH17 6.0	Dec 06, 2015		Soil	S15-De06631		X														
BH18 0.0-1.0	Dec 06, 2015		Soil	S15-De06632	X			X	X	X		X		X	X			X		X
BH18 1.0-2.0	Dec 06, 2015		Soil	S15-De06633					X			X						X		X
BH18 2.0-3.0	Dec 06, 2015		Soil	S15-De06634					X			X						X		X
BH18 3.0-4.0	Dec 06, 2015		Soil	S15-De06635		X														
BH18 6.0	Dec 06, 2015		Soil	S15-De06636		X														
BH05 3.5-4.0	Dec 06, 2015		Soil	S15-De06637	X			X	X	X		X		X	X			X		X
BH07 3.0-4.0	Dec 06, 2015		Soil	S15-De06638	X			X	X	X		X		X	X			X		X
BH12 6.5-7.0	Dec 06, 2015		Soil	S15-De06639					X			X						X		X
QC01	Dec 06, 2015		Soil	S15-De06640	X			X	X	X	X	X			X			X		X

Company Name: JBS & G Australia (NSW & WA) P/L
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Sample Detail					Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract)	Total Organic Carbon	Polyyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Polychlorinated Biphenyls	Metals M8	BTEX	Polychlorinated Biphenyls (PCB)	Volatile Organics	SPOCAS Suite	Moisture Set	Moisture Set	Cation Exchange Capacity	Total Recoverable Hydrocarbons
Laboratory where analysis is conducted																				
Melbourne Laboratory - NATA Site # 1254 & 14271								X												X
Sydney Laboratory - NATA Site # 18217					X	X	X		X	X	X	X	X	X	X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794																X	X	X	X	
External Laboratory																				
QC02	Dec 06, 2015		Soil	S15-De06641	X			X	X	X	X	X			X			X		X
QC03	Dec 06, 2015		Soil	S15-De06642					X			X						X		X
RINSATE	Dec 06, 2015		Water	S15-De06643					X	X		X		X	X					X
TS	Dec 06, 2015		Water	S15-De06644									X							
SB	Dec 06, 2015		Water	S15-De06645									X							

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. This report replaces any interim results previously issued.

Holding Times

Please refer to '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 prior to sample receipt deadlines as stated on the Sample Receipt Advice.

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
COC	Chain of custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

The samples received were not collected in approved asbestos bags and were therefore sub-sampled from the 250mL glass jars. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Rhys Thomas

Senior Analyst-Asbestos (NSW)



Glenn Jackson

National Operations Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Uncertainty data is available on request

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12 Ashley Street, Chatswood, NSW 2067
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email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

TAX INVOICE

To: JBS & G Australia Pty Ltd
Level 1, 50 Margaret St
Sydney NSW 2000

INVOICE NO: SY 146953
INVOICING DATE: 15/12/15
ENVIROLAB REPORT NO: 138764
PAYMENT DUE DATE: 14/01/2016

Attention: Grace Ng

PROJECT NO and DESCRIPTION: 507020, ATP

PURCHASE ORDER NUMBER:

Tests Performed / Description of Service	Unit Cost	Qty	Total Cost
VOC's in soil	\$75.00	2	\$150.00
TRH in Soil (C6-C9) NEPM	\$29.00	3	\$87.00
TRH Soil C10-C40 NEPM draft	\$29.00	3	\$87.00
PAHs in Soil	\$42.00	3	\$126.00
OC/PCB Pesticides in soil	\$48.00	2	\$96.00
8 metals in soil	\$28.00	2	\$56.00
TOC in soil by titration	\$29.00	2	\$58.00
Moisture	\$0.00	3	\$0.00
Asbestos ID in soil	\$34.00	2	\$68.00
Admin Fee	\$25.00	1	\$25.00
<u>Invoice and GST Summary Details</u>	Total Amount:		\$753.00
	GST (10%):		\$75.30
	Total Invoice Amount:		\$828.30

INVOICE PAYMENT OPTIONS

Please make all cheques payable to : **Envirolab Services Pty Ltd**

Please EFT to: **Account Name: Envirolab Services Pty Ltd**
NAB SWIFT Code - NATAAU3303M
Bank: National Australia Bank Branch: Marrickville NSW
BSB: 082 356 Account No: 57981 3018

Remittance advices should be faxed/emailed Fax No: 02 9910 6299 e-mail: accounts@envirolabservices.com.au

Visa and Mastercard payments are accepted.

PLEASE NOTE: OUR PAYMENT TERMS ARE STRICTLY 30 DAYS FROM DATE OF INVOICE

SAMPLE RECEIPT ADVICE

Client Details	
Client	JBS & G (NSW & WA) Pty Ltd
Attention	N Cusson

Sample Login Details	
Your Reference	507020, ATP
Envirolab Reference	138764
Date Sample Received	08/12/2015
Date Instructions Received	08/12/2015
Date Results Expected to be Reported	15/12/2015

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	3 soils
Turnaround Time Requested	Standard
Temperature on receipt (°C)	1.2
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au

Sample and Testing Details on following page

<i>Sample Id</i>	<i>VOCs in soil</i>	<i>TRH in Soil (C6-C9) NEPM</i>	<i>svTRH (C10-C40) in Soil</i>	<i>PAHs in Soil</i>	<i>Organochlorine Pesticides in soil</i>	<i>PCBs in Soil</i>	<i>Acid Extractable metals in soil</i>	<i>Total Organic Carbon (Walkley Black)</i>	<i>Asbestos ID - soils</i>
QC01A	✓	✓	✓	✓	✓	✓	✓	✓	✓
QC02A	✓	✓	✓	✓	✓	✓	✓	✓	✓
QC03A		✓	✓	✓					



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email: sydney@envirolab.com.au
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Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS

138764

Client:

JBS & G (NSW & WA) Pty Ltd
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention: N Cusson

Sample log in details:

Your Reference:	50720, ATP
No. of samples:	3 soils
Date samples received / completed instructions received	08/12/15 / 08/12/15

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

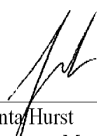
Report Details:

Date results requested by: / Issue Date:	15/12/15 / 15/12/15
Date of Preliminary Report:	Not Issued

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

Results Approved By:


Jacinta Hurst
Laboratory Manager

Envirolab Reference: 138764
Revision No: R 00



VOCs in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	138764-1 QC01A 06/12/2015 Soil	138764-2 QC02A 06/12/2015 Soil
Date extracted	-	10/12/2015	10/12/2015
Date analysed	-	14/12/2015	14/12/2015
Dichlorodifluoromethane	mg/kg	<1	<1
Chloromethane	mg/kg	<1	<1
Vinyl Chloride	mg/kg	<1	<1
Bromomethane	mg/kg	<1	<1
Chloroethane	mg/kg	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1
1,1-dichloroethane	mg/kg	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1
bromochloromethane	mg/kg	<1	<1
chloroform	mg/kg	<1	<1
2,2-dichloropropane	mg/kg	<1	<1
1,2-dichloroethane	mg/kg	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1
1,1-dichloropropene	mg/kg	<1	<1
Cyclohexane	mg/kg	<1	<1
carbon tetrachloride	mg/kg	<1	<1
Benzene	mg/kg	<0.2	<0.2
dibromomethane	mg/kg	<1	<1
1,2-dichloropropane	mg/kg	<1	<1
trichloroethene	mg/kg	<1	<1
bromodichloromethane	mg/kg	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1
Toluene	mg/kg	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1
dibromochloromethane	mg/kg	<1	<1
1,2-dibromoethane	mg/kg	<1	<1
tetrachloroethene	mg/kg	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1
chlorobenzene	mg/kg	<1	<1
Ethylbenzene	mg/kg	<1	<1
bromoform	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
styrene	mg/kg	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1
o-Xylene	mg/kg	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1

VOCs in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	138764-1 QC01A 06/12/2015 Soil	138764-2 QC02A 06/12/2015 Soil
isopropylbenzene	mg/kg	<1	<1
bromobenzene	mg/kg	<1	<1
n-propyl benzene	mg/kg	<1	<1
2-chlorotoluene	mg/kg	<1	<1
4-chlorotoluene	mg/kg	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1
tert-butyl benzene	mg/kg	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1
sec-butyl benzene	mg/kg	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1
4-isopropyl toluene	mg/kg	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1
n-butyl benzene	mg/kg	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1
hexachlorobutadiene	mg/kg	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1
Surrogate Dibromofluorometha	%	93	93
Surrogate aaa-Trifluorotoluene	%	94	90
Surrogate Toluene-d8	%	99	99
Surrogate 4-Bromofluorobenzene	%	101	98

TRH in Soil (C6-C9) NEPM Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	138764-1 QC01A 06/12/2015 Soil	138764-2 QC02A 06/12/2015 Soil	138764-3 QC03A 06/12/2015 Soil
Date extracted	-	10/12/2015	10/12/2015	10/12/2015
Date analysed	-	14/12/2015	14/12/2015	10/12/2015
TRHC ₆ - C ₉	mg/kg	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25
Surrogate aaa-Trifluorotoluene	%	94	90	126

svTRH (C10-C40) in Soil				
Our Reference:	UNITS	138764-1	138764-2	138764-3
Your Reference	-----	QC01A	QC02A	QC03A
Date Sampled	-----	06/12/2015	06/12/2015	06/12/2015
Type of sample		Soil	Soil	Soil
Date extracted	-	10/12/2015	10/12/2015	10/12/2015
Date analysed	-	11/12/2015	11/12/2015	11/12/2015
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	83	86	85

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	138764-1 QC01A 06/12/2015 Soil	138764-2 QC02A 06/12/2015 Soil	138764-3 QC03A 06/12/2015 Soil
Date extracted	-	10/12/2015	10/12/2015	10/12/2015
Date analysed	-	10/12/2015	10/12/2015	10/12/2015
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	89	130	90

Organochlorine Pesticides in soil			
Our Reference:	UNITS	138764-1	138764-2
Your Reference	-----	QC01A	QC02A
Date Sampled	-----	06/12/2015	06/12/2015
Type of sample		Soil	Soil
Date extracted	-	10/12/2015	10/12/2015
Date analysed	-	10/12/2015	10/12/2015
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	93	92

PCBs in Soil			
Our Reference:	UNITS	138764-1	138764-2
Your Reference	-----	QC01A	QC02A
Date Sampled	-----	06/12/2015	06/12/2015
Type of sample		Soil	Soil
Date extracted	-	10/12/2015	10/12/2015
Date analysed	-	10/12/2015	10/12/2015
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	93	92

Acid Extractable metals in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	138764-1 QC01A 06/12/2015 Soil	138764-2 QC02A 06/12/2015 Soil	138764-3 QC03A 06/12/2015 Soil
Date prepared	-	10/12/2015	10/12/2015	10/12/2015
Date analysed	-	10/12/2015	10/12/2015	10/12/2015
Arsenic	mg/kg	4	11	17
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	9	5	8
Copper	mg/kg	2	3	3
Lead	mg/kg	10	9	8
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1
Zinc	mg/kg	<1	<1	<1

Misc Inorg - Soil			
Our Reference:	UNITS	138764-1	138764-2
Your Reference	-----	QC01A	QC02A
Date Sampled	-----	06/12/2015	06/12/2015
Type of sample		Soil	Soil
Date prepared	-	10/12/2015	10/12/2015
Date analysed	-	10/12/2015	10/12/2015
Total Organic Carbon (Walkley Black)	mg/kg	<1,000	1,400

Moisture				
Our Reference:	UNITS	138764-1	138764-2	138764-3
Your Reference	-----	QC01A	QC02A	QC03A
Date Sampled	-----	06/12/2015	06/12/2015	06/12/2015
Type of sample		Soil	Soil	Soil
Date prepared	-	10/12/2015	10/12/2015	10/12/2015
Date analysed	-	11/12/2015	11/12/2015	11/12/2015
Moisture	%	15	13	12

Asbestos ID - soils			
Our Reference:	UNITS	138764-1	138764-2
Your Reference	-----	QC01A	QC02A
Date Sampled	-----	06/12/2015	06/12/2015
Type of sample		Soil	Soil
Date analysed	-	15/12/2015	15/12/2015
Sample mass tested	g	Approx. 35g	Approx. 35g
Sample Description	-	Grey clay soil	Grey clay soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
		Organic fibres detected	Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-036	Total Organic Carbon - A titrimetric method that measures the oxidisable organic content of soils. Based upon Walkley/Black and 'Rayment and Lyons 2011'.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			14/12/2015	[NT]	[NT]	LCS-2	14/12/2015
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	86%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	83%
2,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	96%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	80%
1,1-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	79%
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	77%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	79%
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-2	89%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
isopropylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	92	[NT]	[NT]	LCS-2	89%
Surrogate aaa-Trifluorotoluene	%		Org-014	91	[NT]	[NT]	LCS-2	89%
Surrogate Toluene-d8	%		Org-014	99	[NT]	[NT]	LCS-2	98%
Surrogate 4-Bromofluorobenzene	%		Org-014	100	[NT]	[NT]	LCS-2	101%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
TRH in Soil (C6-C9) NEPM						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			14/12/2015	[NT]	[NT]	LCS-2	14/12/2015
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-2	85%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-2	85%
Surrogate aaa-Trifluorotoluene	%		Org-016	91	[NT]	[NT]	LCS-2	89%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			11/12/2015	[NT]	[NT]	LCS-2	11/12/2015
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-2	116%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	95%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	83%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-2	116%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	95%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	83%
Surrogate o-Terphenyl	%		Org-003	87	[NT]	[NT]	LCS-2	120%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	112%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	127%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	99%
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	101%
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	107%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	114%
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	LCS-2	113%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	96	[NT]	[NT]	LCS-2	106%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	96%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	86%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	85%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	101%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	99%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	96%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	98%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	102%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	94%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	96%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	107	[NT]	[NT]	LCS-2	108%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Date analysed	-			10/12/2015	[NT]	[NT]	LCS-2	10/12/2015
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-2	102%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	107	[NT]	[NT]	LCS-2	108%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date prepared	-			10/12/2015	[NT]	[NT]	LCS-4	10/12/2015
Date analysed	-			10/12/2015	[NT]	[NT]	LCS-4	10/12/2015
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-4	108%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-4	104%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	103%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	102%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	99%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-4	91%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	99%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-4	103%

Client Reference: 50720, ATP

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Misc Inorg - Soil						Base II Duplicate II %RPD		
Date prepared	-			10/12/2015	[NT]	[NT]	LCS-1	10/12/2015
Date analysed	-			10/12/2015	[NT]	[NT]	LCS-1	10/12/2015
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	[NT]	[NT]	LCS-1	98%

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.

Note: Samples 138764-1,2 were sub-sampled from jars provided by the client.

Asbestos ID was analysed by Approved Identifier: Paul Ching

Asbestos ID was authorised by Approved Signatory: Paul Ching

INS: Insufficient sample for this test

NR: Test not required

<: Less than

PQL: Practical Quantitation Limit

RPD: Relative Percent Difference

>: Greater than

NT: Not tested

NA: Test not required

LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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