



**Afteron Limited
Phase 2 Environmental Site
Assessment**

**Eastern Creek Quarantine Station,
60 Wallgrove Rd, Minchinbury, NSW**

**1 November 2013
43002-55929
JBS&G**

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Table of Contents

List of Abbreviations	iv
Executive Summary.....	v
1 Introduction.....	1
1.1 Background and Objectives	1
1.2 Objectives	1
1.3 Scope of Work.....	2
2 Site Condition & Surrounding Environment.....	3
2.1 Site Identification.....	3
2.2 Site Description	3
2.3 Surrounding Landuse	7
2.4 Topography	8
2.5 Hydrology	8
2.6 Geology	8
2.7 Acid Sulphate Soils	9
2.8 Hydrogeology.....	9
2.9 Meteorology.....	9
3 Site History	10
3.1 Summary Site History	10
3.2 Aerial Photographs.....	10
3.3 EPA Records	10
3.4 WorkCover Dangerous Goods Records	11
3.5 Australian and NSW Heritage Records	11
3.6 Previous Investigations	11
3.6.1 Environmental Due Diligence Program – Phase 2 (DASCEM 2001)	11
3.6.2 Temporary Grenade Range (G-tek 2003).....	13
3.6.3 Phase 1 Environmental Site Assessment (JBS 2009).....	13
3.7 Integrity Assessment	14
4 Conceptual Site Model	15
4.1 Potential Areas of Environmental Concern	15
4.2 Potentially Contaminated Media	16
4.3 Potential for Migration.....	17
5 Sampling and Analytical Plan	18
5.1 Data Quality Objectives	18
5.1.1 State the Problem.....	18
5.1.2 Identify the Decision	18

5.1.3	Identify Inputs to the Decision.....	18
5.1.4	Define the Study Boundaries.....	19
5.1.5	Develop a Decision Rule.....	19
5.1.6	Specify Limits of Decision Error.....	20
5.1.7	Optimise the Design for Obtaining Data	22
5.2	Soil Sampling Methodology.....	22
5.3	Decontamination	23
5.4	Duplicate and Triplicate Sample Preparation.....	23
5.5	Laboratory Analyses	23
6	Assessment Criteria	25
6.1	Regulatory Guidelines	25
6.2	Soil Assessment Criteria	25
7	Quality Assurance/ Quality Control	29
7.1	QA/QC Results	29
7.2	QA/QC Discussion	30
7.2.1	Precision	30
7.2.2	Accuracy.....	30
7.2.3	Representativeness.....	30
7.2.4	Comparability	31
7.2.5	Completeness.....	31
7.2.6	Sensitivity	31
7.3	QA/QC Assessment	32
8	Soil Results	33
8.1	Field Observations	33
8.2	Soil Analytical Results	33
8.2.1	Metals	33
8.2.2	TPH	33
8.2.3	BTEX.....	33
8.2.4	PAHs.....	33
8.2.5	OCPs and PCBs.....	34
8.2.6	VOCs	34
8.2.7	Herbicides.....	34
8.2.8	Asbestos.....	34
9	Site Characterisation.....	35
9.1	Potential Risks to Future Onsite Receptors	35
9.2	Background Soil Concentrations	35

9.3	Chemical Mixtures	35
9.4	Aesthetics	35
9.5	Potential Migration of Contaminants	35
9.6	Site Management Strategy	35
10	Conclusions and Recommendations	36
10.1	Conclusions	36
10.2	Recommendations	36
11	Limitations	37

Figures

Figure 1 – Site Location

Figure 2 – Site Layout

Figure 3 – Soil Sampling Locations

Tables

Table A – Soil Analytical Results

Appendices

Appendix A – Site Photographic Log

Appendix B – Borehole logs

Appendix C – Laboratory Reports and Chain of Custody Documentation

List of Abbreviations

A list of the common abbreviations used throughout this report is provided below.

AST	Above Ground Storage Tank
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
Bgs	Below Ground Surface
COPC	Contaminant of Potential Concern
DECCW	NSW Department of Environment, Climate Change and Water (now OEH)
DQI	Data Quality Indicator
DQO	Data Quality Objective
EIL	Ecological Investigation Level
EPA	NSW Environmental Protection Authority
ESA	Environmental Site Assessment
ha	Hectare
HIL	Health Investigation Level
LOR	Limit of Reporting
MAH	Monocyclic Aromatic Hydrocarbon
OEH	NSW Office of Environment and Heritage
OCPs	Organochlorine Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percentage Difference
SAQP	Sampling, Analytical and Quality Plan
sVOC	Semi-volatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Executive Summary

JBS&G (NSW & WA) Pty Ltd (JBS&G) was engaged by Afteron Limited (Afteron) to conduct a Phase 2 Environmental Site Assessment (ESA) at the Eastern Creek Quarantine Station located at 60 Wallgrove Rd, Minchinbury, NSW (the site). The site is legally identified as Lot 1 DP1040948, and has an area of approximately 22 hectares (ha) as shown in **Figures 1 and 2**.

It is understood that the site will be marketed for sale for future commercial/industrial use, and an environmental assessment is required for Due Diligence purposes.

The objective of the investigation is to characterise potential contamination at the site, and to draw conclusions regarding the suitability of the site for the proposed use, or make recommendations to enable such conclusions.

The completed scope of work comprised:

- Review and summary of relevant published geological and hydrogeological data, including a review of licensed groundwater bore information;
- Review of existing site investigation information;
- A detailed site inspection to identify potential areas of environmental concern (AECs) and COPCs identified in the historical record review;
- Soil sampling at 115 locations across the site;
- Analysis of selected soil samples for various COPCs;
- Preparation of this ESA report in general accordance with guidelines made or approved by the EPA.

Based on the soil sampling during the current investigation the following findings were made:

- Concentrations of all COPCs identified for the site were reported below the adopted criteria for commercial/industrial health based criteria (HIL-D) and ecological based criteria for commercial/industrial landuse;
- Non-friable Asbestos containing materials (ACM) and friable asbestos were not observed during the current investigation;
- Some of the buildings present at the site may contain asbestos containing materials and/or lead paint.

It is recommended that a hazardous building materials survey be completed for the buildings present at the site. The results of the assessment indicate that under the current condition of site, it is suitable for continued commercial/industrial landuse. The site is to be divested in 2015, the results of this assessment should be reviewed then to understand if they data and conclusions are still valid.

1 Introduction

1.1 Background and Objectives

JBS&G (NSW & WA) Pty Ltd (JBS&G) was engaged by Afteron Limited (Afteron) to conduct a Phase 2 Environmental Site Assessment (ESA) at the Eastern Creek Quarantine Station located at 60 Wallgrove Rd, Minchinbury, NSW (the site). The site is legally identified as Lot 1 DP1040948, and has an area of approximately 22 hectares (ha) as shown in **Figures 1 and 2**.

It is understood that the site will be marketed for sale for future commercial/industrial use, and an environmental assessment is required for Due Diligence purposes. It is further understood that marketing of the site is expected to commence in early October 2013. The current lease will end in 2015, and the Quarantine Station is expected to remain onsite to lease end.

The most recent environmental assessment (JBS 2009¹) identified and ranked areas of environmental concern (AECs) according to their associated risk of widespread impact. High risk areas included the single current aboveground storage tank (AST), the former AST location and the location of a former underground storage tank (UST). Medium risk areas included machinery storage sheds, a diesel storage area, a disused incinerator and fill material identified in various locations across the site. Low risk areas included the remaining current and former buildings across the site, the historical rural use of the site and isolated areas of waste material in the back (western) paddock.

An earlier investigation documented the relocation of the AST and removal of associated hydrocarbon contaminated soil, the removal of the UST, detailed the incinerator use, and surface water and kennel effluent being directed to the settling ponds (DASCEM 2001²). A former grenade range was thought to be located onsite where unexploded ordnance (UXO) may be present. A subsequent review of historical information (G-tek 2003³) determined the Temporary Grenade Range was actually located approximately 300 yards (approximately 250 metres) west of the site.

The investigation was completed in general accordance with relevant guidelines made or approved by the NSW Environment Protection Authority (EPA).

1.2 Objectives

The objective of the investigation is to characterise potential contamination at the site, and to draw conclusions regarding the suitability of the site for the proposed use, or make recommendations to enable such conclusions.

¹ Phase 1 Environmental Site Assessment, Eastern Creek Quarantine Station, 60 Wallgrove Rd, Minchinbury, NSW. JBS Environmental, JBS 40736-12930, April 2009 (JBS 2009)

² Environmental Due Diligence Program – Phase 2. Special Purpose & Industrial Estate, Animal Quarantine Inspection Service, Wallgrove Rd Eastern Creek, NSW (SAP No 19556). DASCEM, Report No CL529/06, February 2001 (DASCEM 2001)

³ Correspondence to Mr Robert McCuaig, Colliers International (NSW) Pty Ltd from G-tek Australia Pty Ltd, titled 60 Wallgrove Rd, Eastern Creek., and dated 1 October 2003 (G-tek 2003)

1.3 Scope of Work

The agreed scope of work comprised:

- Review and summary of relevant published geological and hydrogeological data, including a review of licensed groundwater bore information;
- Review of existing site investigation information;
- A detailed site inspection to identify potential areas of environmental concern (AECs) and COPCs identified in the historical review;
- Soil sampling at 115 locations across the site;
- Analysis of selected soil samples for various COPCs; and
- Preparation of this ESA report in general accordance with guidelines made or approved by the EPA.

2 Site Condition & Surrounding Environment

2.1 Site Identification

The site details are summarised in **Table 2.1** following and based on the previous investigation completed at the site (JBS 2009). The site location is shown on **Figure 1** and a site layout is shown on **Figure 2**.

Table 2.1 Summary Site Details

Item	Description
Street address	60 Wallgrove Road, Minchinbury
Lot Number	Lot 1 DP 1040948
Local Government Authority	Blacktown City Council
Geographical Coordinates	33 47.663 S 151 51.072 E
Current Zoning	Zone No 5(a) Special Uses – Commonwealth Uses
Site Area	Approximately 22 Ha
Current land-use	The site is currently occupied by the AQIS Eastern Creek Quarantine Station
Future land-use	Commercial/Industrial

2.2 Site Description

A detailed site inspection was conducted by one of JBS&G's trained and experienced environmental consultants on 24th September 2013.

The site is a roughly square shaped portion of land, occupying an area of approximately 22 Ha. The site is bound by Wallgrove Rd to the east and the M4 Motorway to the south. Pine Grove Memorial Park Lawn Cemetery lies to the north and west of the site. A concrete sealed internal road leads from Wallgrove Rd towards a sealed car park in the central portion of the site.

The site is currently occupied by the Australian Quarantine and Inspection Service (AQIS) for use as an animal and plant quarantine station. The site is secured by chain link fences on all sides, although a Right of Carriageway is located along the western and northern site boundaries. A chain link fence runs along the internal Right of Carriageway boundary, but the external site boundary along the Right of Carriageway is unfenced.

The car parking area

The car park section of the site includes the sealed driveway entrance from Wallgrove Rd. The driveway continues west towards a bitumen car park located between the AQS Office section and the PQS section. Several small trees are located in the car park ranging from approximately 1-4 m in height.

The bitumen is in reasonable condition with no staining or significant cracking observed. The car parking area had a consistent grade gently to the east. Some fill material (topsoil) may have been imported for the garden beds within the car park. No other areas of potential fill were identified.

The site entrance

The site entrance comprises a grassed area in the north eastern corner of the site. Three single storey brick residential buildings with tiled rooves are located within this section. Each residence has a metal shed associated with it, and has yards fenced by wire mesh or timber log fences. The residences appear to be connected to the local sewer network. A sealed bitumen road runs from the site entrance driveway to the residences. Included within this section is a vacant grassed area located immediately west of the residences.

The section is generally flat with a slight slope to the northeast in the eastern half of the section. A number of large trees are located within the section. The grass was in good condition with no evidence of stressed vegetation. There was no visual evidence of fill material in the section.

Plant Quarantine Station

The Plant Quarantine Station (PQS) office is located in the eastern portion of the site adjacent to the car park.

The PQS office is an L-shaped single storey brick building with steel roofing. A concrete footpath lines the perimeter of the office. Sewer tanks and a sump system are located in the southeastern corner of the section adjacent to two large rain water tanks.

Five glass greenhouses are located in the central and southern portions of the section, which are built on concrete slabs in good condition. Each glass greenhouse is attached to a temperature control unit. One large and one small plastic mesh greenhouse are located along the eastern portion of the section, and another is located in the southwestern corner. All mesh glass houses have concrete bases in good condition. The large mesh greenhouse in the eastern portion has a small brick utility shed attached to it.

A large steel shed on a concrete base is located in the central portion of the PQS section, and is used for equipment maintenance and general quarantine activities.

Four large gas tanks were located on a small concrete area between the PQS office and the northern end of the steel shed. A small grease trap is located east of the steel shed.

The concrete throughout the PQS section was generally in good condition with no visible cracking or staining. Small grass areas were in good condition with no evidence of stressed vegetation identified.

A surface water drainage channel runs through the PQS section to a pond approximately 2 x 2 m and 1 m deep. The pond drains into a stormwater drainage channel to the southeast which exits the site via the central portion of the eastern site boundary. The stormwater channel continues south along Wallgrove Rd.

Animal Quarantine Station Office

The Animal Quarantine Station (AQS) Office section is located adjacent to the car park in the central portion of the site. The AQS Office comprises a single storey brick office with steel roofing with two demountable offices on the western side used for administration and site facilities.

A small in-ground swimming pool is located to the west of the demountable offices.

A small brick shed with steel roof is located on a concrete slab in the southern portion of the section. Access to the shed was not provided and no information was provided regarding material stored within this shed.

The remainder of the section is grassed with scattered trees ranging from 10-15 m in height. The western portion of the section slopes gently to the west, while the eastern portion slopes gently to the east.

Bee House

The Bee House section is located between the PQS and AQS Office in the central eastern portion of the site. The Bee House section comprises a single storey brick building with corrugated ACM roofing and potentially ACM eaves. These eaves and the roofing were in a moderate condition. A large metal rainwater tank is located adjacent to the building and to water services for the site. A water hydrant is located near the northeastern corner of the

building. The remainder of the section is grassed with scattered trees, approximately 10-15 m high.

An area of potential cut and fill was identified along the eastern section boundary, adjacent to the glass greenhouses within the PQS, with some changes in the natural grade of the land.

The section slopes gently to the southeast. A surface water drainage channel runs from the northern section boundary in a southeasterly direction towards the PQS section.

Dog Detector Unit (DDU)

The Dog Detector Unit (DDU) section is located in the eastern portion of the site. This section includes 3 single storey brick dog kennels with steel roofing and steel fencing. The kennels are surrounded by grassed areas enclosed with a 2.0 m tall Colourbond fence. Each kennel comprises individual areas approximately 6 x 1.5 m. The DDU section slopes gently to the east. Minor areas of cut and fill were noted where the area had been levelled during the construction of each kennel.

The kennels are reportedly cleaned manually with water hoses. Effluent drains through gutters along the eastern and western side of each kennel to an effluent collection point on the southern corner of each kennel, where it then drains underground to a sewer treatment unit in the eastern section. Effluent is then pumped to a settling pond in the south west corner of the site in the Back Paddock section.

Dog/Cat

The Dog/Cat section is located in the south eastern portion of the site, adjacent to the DDU and Horse Complex sections. The Dog/Cat section comprises a small single storey brick office shed with steel roofing, ten single storey brick dog kennels with steel roofing and steel fencing, and two split single storey brick catteries with steel roofing and steel fencing.

Two large gas tanks are located on the concrete slab on the western side of the office shed. Each dog kennel is comprised of individual areas approximately 6 x 1.5 m and is surrounded by grassed areas. The kennels and catteries are cleaned manually with water hoses. Effluent drains along the eastern and western side of each kennel to effluent collection points on the northern corner of each kennel. The effluent then drains underground to the sewer treatment unit in the eastern section.

Effluent from the catteries drains along the eastern and western side of each cattery to effluent collection points on the southern corners of each building. From here effluent drains underground to the sewer treatment unit in the eastern section. Effluent is then pumped to a settling pond in the southwest corner of the site in the Back Paddock section.

Sealed bitumen roadways are located accessing the buildings in this section. The remainder of the section is grassed with a few trees located in the north western corner, approximately 10-15 m high. The Dog/Cat section has a gentle easterly slope.

Horse Complex

The Horse Complex is located in the western portion of the site, and comprises seven horse stables. The stable walls are laminated wood covered with metal with potentially ACM roofing. An uncovered exercise area is located between each stable, which is bound by wooden fencing with sawdust and loose dirt on the surface. Additional areas are located to the southeast of the stables.

Fifteen wooden corrals are located around the stables, and are used for exercising horses.

Two round buildings with reinforced plastic walls and suspected ACM roofing are located in the northeastern and southeastern corners of the section. These buildings are for exercising horses in unfavourable weather. There is evidence of cut and fill activity near the round building in the northeastern corner.

The remains of four buildings (comprising bricks and scrap metal) are identified near the western section boundary. These appear to be former wet-weather corrals which were demolished prior to 2002. No ACM was observed on the surface in these area.

Two single storey brick buildings used for quarantine administration are located in the eastern portion of the section. These buildings have steel rooves with potential ACM eaves. A grease trap is located immediately to the north of the buildings, and services the trade waste from the plant quarantine areas of the site. No ACM was observed on the surface in these area.

A small single storey brick veneer building with steel roofing is located in the northeastern portion of the section, which is used for horse medical purposes. A disused incinerator is located west of this, within a concrete floored brick storage area. The concrete is in good condition with no evidence of cracking or staining. The incinerator was reportedly previously used to incinerate used straw animal bedding and used wooden crates. The resultant ash was then mixed with horse manure and sawdust and spread over the Back Paddock section. The incinerator has not been used for a number of years. Horse manure is currently sold to mushroom growers for use as fertiliser.

A tractor was stored in the brick bunded area within this section, along with two 200 L diesel fuel drums. A disused above ground gas tank is located near the northern section bound

Machinery Sheds

The Machinery Sheds section is located in the northern portion of the site adjacent to the Cattle Yards. The Machinery Sheds section comprises four buildings/sheds, a decommissioned aboveground storage tank (AST) and a former underground storage tank (UST).

A large brick storage shed with steel roofing located on the eastern section boundary stores used wooden crates. A small brick storage shed with steel roofing in the central portion is used to store flammable materials including ethanol. Two single storey brick buildings with steel roofing located along the western section boundary are used for storage and administrative purposes. To the west of the bunded area are two uncovered horse waste storage areas.

The decommissioned aboveground storage tank (AST) is located adjacent to the flammables storage shed. The AST formerly stored diesel used by vehicles for quarantine purposes. The AST is currently empty and has not been used for six years. The AST is bunded and the ground surface beneath the AST is in good condition. There are no visible cracks or staining of concrete in or outside the bunded area. The bunded area is surrounded by grass with no visible evidence of spills or leaks.

Anecdotal evidence suggested the former underground storage tank (UST) was formerly located south of the AST, but was reportedly removed several years ago. A former AST was also located north of the current AST, but was removed between 2001 and 2009. Further details regarding storage history or dates of tank removal were not identified during this investigation.

A large concrete water tank is located in the southwestern corner of the section, adjacent to a small brick shed with steel roofing used as a pump room. Water from the wash bay

area in the Horse Complex section collects in the water tank. The stored water is used for fire control purposes.

Sealed bitumen roads access the sheds, with the remaining areas grassed with a few large trees. The Machinery Sheds section has a gentle north westerly slope.

Horse Yards

The horse Yards section is located in the northern portion of the site. This section was formerly used for exercising horses, as well as for emergency group quarantine accommodation, but has reportedly not been used for some time. A metal awning is located in the central portion of the section. The area is predominantly grassed with only a few large trees located in the northwestern corner of the section. The section has a general westerly slope and surface water is expected to drain to the west into the creek located in the Back Paddock section.

Back Paddock

The Back Paddock section is located along the western and southern boundaries of the site. There are no buildings or sealed surfaces within this section and no animals or plants are kept here for quarantine purposes. The majority of the section is grassed with scattered large trees ranging from 10-15m in height.

An effluent pumping station is located in the southwestern corner, adjacent to the sediment settling pond. Effluent from the DDU and Dog/Cat sections is pumped from the collection point to the settling pond as a primary treatment of animal effluent. The pond is the highest point on the site and has been constructed above the natural grade of the land. Fill (including some building waste) has been used to construct the pond.

Excess water from the settling pond flows in a northerly direction to a second pond. Overflow from this pond joins an ephemeral creek which enters the site on the western boundary. The ephemeral creek flows towards the northern site boundary and continues into the cemetery. Surface water runoff from the Machinery Sheds, Cattle Yards, Horse Complex and part of the AQS Office sections enters the Back Paddock section and joins this creek. No excess erosion was identified in the vicinity of the creek.

The former dressage area is located east of the pumping station. A wooden perimeter is visible on the ground surface and sand remains within this perimeter. The ground surface is elevated above the natural grade in this area.

An area of fill was identified to the east of the former dressage area. Anecdotal evidence suggested the area was previously used to bury deceased animals and is located approximately 3 m above the natural grade. However, this was not verified.

Dumped waste material, including bricks, cement and car tyres) overgrown with grass was identified west of the settling pond. No ACM was observed on the surface in these area.

A photographic log of the site inspection is provided in **Appendix A**.

2.3 Surrounding Landuse

The current landuse of adjacent properties or properties across adjacent roads is shown in **Figure 2** and summarised below.

- North – Pine Grove Memorial Park Lawn Cemetery is located north and west of the site, followed by low density housing;
- East – Open farm land and bushland is located across Wallgrove Road to the east;

- South – The Great Western Motorway is located south of the site, followed by a construction area (formerly Australia’s Wonderland theme park); and
- West – Pine Grove Memorial Park Lawn Cemetery is located north and west of the site, followed by low density housing.

The graveyard is not considered to be a potential offsite contamination source based on the relative location of the graveyard from the site, which is cross- and downgradient from the site. It is anticipated that any potential groundwater contamination generated at the cemetery would be unlikely to impact upon the site.

2.4 Topography

The regional topographic map (DNR 2001⁴) indicated that the site has an elevation of approximately 50 m Australian Height Datum (AHD). The site lies within a generally flat area with a gentle slope to the east towards Eastern Creek.

A slight ridge runs north-south through the central portion of the site. The western portions of the site slope gently west and the eastern portions slope gently east.

The settling pond in the south western corner of the site is the highest point of the site, which appeared to have been filled historically.

A former creek which was identified during the review of historical documents appeared to have been modified to a stormwater drain, and now runs towards the east.

2.5 Hydrology

Two dams are located in the south western portion at a higher elevation than the remainder of the site. The southernmost dam is the settlement pond, where effluent and wash water is pumped to from the quarantine operations. This overflows into a small creek which runs to the second northernmost dam, which overflows into an ephemeral creek running towards the northern site boundary.

A small stormwater drain runs through the central portion of the site, from southwest to east. A small ephemeral creek runs through the western portion of the site towards the north.

A tributary to Eastern Creek is located some 60 m north of the northern site boundary. Eastern Creek is located some 800 m east of the site. Eastern Creek adjoins South Creek and the Hawkesbury River some 20 km north of the site.

The majority of rainfall at the site is expected to infiltrate the silty clay soil in areas which are not sealed. Stormwater runoff generated in heavy or prolonged rain periods is expected to move towards the stormwater channel and creek.

2.6 Geology

The regional geological map (DME 1991⁵) indicates the site is underlain by residual Wianamatta group shale. This shale usually weathers to form moderately to highly reactive clay soils.

The regional soil map (SCS NSW 1989⁶) indicates that soil in the area generally ranges from shallow to moderately deep red podzolic soils on crests to moderately deep yellow podzolic soils on the lower slopes and in drainage lines.

⁴ Department of Natural Resources (2001). National Topographic Map Series. Prospect Sheet 9030-2N (Ed 3).

⁵ Department of Minerals and Energy (1991). Penrith Geological Series Sheet 9030.

2.7 Acid Sulphate Soils

Based on the Acid Soil Sulphate Risk Map (1997⁷), the site and immediate surrounds have no known occurrence of acid sulphate soil materials.

2.8 Hydrogeology

Based on the information provided in the previous assessment (JBS 2009), the nearest registered bore is located approximately 450 m west of the site. The next two nearest bores are located approximately 1 km northwest and east of the site. No other information was available regarding the bores registered use, the geology of the location, well construction or the depth to or quality of groundwater in the area.

From a registered bore located approximately 4 km northwest of the site (GW018361), the geology comprised clay to approximately 14 m, followed by bands of basalt and shale, with sandstone at depth.

Based on the limited information from the registered bores and considering the relative elevation of the site, regional groundwater is expected to be contained within the consolidated rock of the sandstone and shale. A perched groundwater bearing unit may be present at any fill/clay interface or clay/shale interface at the site, where rainfall has infiltrated the ground surface.

2.9 Meteorology

A review of average climatic data for the nearest Bureau of Meteorology monitoring location (Orange Airport⁸) indicates that the site is located within the following metrological setting:

- Average minimum temperatures vary from 0.7°C in July to 12.4°C in February;
- Average maximum temperatures vary from 9.3°C in July to 26.0°C in January;
- The average annual rainfall is approximately 893 mm with rainfall; and
- Monthly rainfall varies from 52.6 mm in April to 93.6 mm in August.

⁶ Soil Conservation Service of NSW (1989). Soil Landscape Series Sheet 9130 (3rd Edition).

⁷ DLWC (1997). Acid Sulphate Soil Risk Map (Edition 2).

⁸ <http://www.bom.gov.au/climate/averages.html> Commonwealth of Australia, 2012 Bureau of Meteorology, Product accessed by JBS on 21 Oct 2013.

3 Site History

3.1 Summary Site History

The assessment of site history presented in JBS (2009) is considered appropriate for this ESA and is summarised in **Table 3.1** below.

Table 3.1 Summary Site History and Likely Uses

Period	Activity	Source
1914-1938	The site was owned by various private owners, presumably for rural purposes.	Title documentation
1938-1942	A portion of the site was transferred to the Permanent Trustee Company of NSW.	Title documentation
1942-2001	The site was transferred to The Commonwealth of Australia, to be used as an army training camp.	Title documentation
1947	The site was predominantly cleared with a number of sheds near the eastern site boundary. Buildings associated with the army camp area identified to the south of the site.	Aerial photo (1947)
1961	All onsite sheds but one have been demolished. The remaining areas of the site are vacant with regenerated shrubs and trees.	Aerial photo (1961)
1970	The site remains similar to the previous photo.	Aerial photo (1970)
1978	The small shed near the eastern site boundary has been demolished. The western portion of the site remains cleared, while the remaining areas are vegetated.	Aerial photo (1978)
1986	The site has undergone significant development, with the installation of sheds, residences, sealed access roads and a dam at the site. The creek formerly running through the site is no longer identified.	Aerial photo (1986)
1994	The site remains similar to the previous photo. A pool has been installed in the central portion of the site.	Aerial photo (1994)
2001	The site was transferred to Lisand Pty Ltd and leased to the Commonwealth of Australia.	Title documentation
2002	The site has been further developed, with new sheds near the eastern site boundary, and the demolition of storage tanks or circular sheds in the south western portion.	Aerial photo (2002)
2003	The site was transferred to Afteron Ltd, and leased to The Commonwealth of Australia.	Title documentation
2009	The site is an operational plant and animal quarantine station, with site features as described in Section 2.1 .	Site inspection (2009)

3.2 Aerial Photographs

The JBS (2009) report included a review of the historical aerial photographs from the years 1947, 1961, 1970, 1978, 1986, 1994 and 2002.

The review indicated that the site remained predominantly vacant until 1986, when the Quarantine Station was built. The current site layout is similar to the 1986 layout.

Copies of the historical aerial images were provided in the JBS (2009) report.

3.3 EPA Records

The JBS (2009) report included a review of regulatory records for the site. The search of the public register maintained by the NSW EPA under the *Protection of the Environment Operations Act 1997* identified that, for the site there were:

- No records of any Environment Protection Licences registered to the Site;
- No prevention, clean-up or prohibition notices; and

- No transfer, variation, suspension, surrender or revocation of an environment protection licence.

JBS also undertook a search of the public contaminated land register maintained by the NSW EPA. The search did not identify any current notices issued under the Contaminated Land Management Act 1997 for the site.

3.4 WorkCover Dangerous Goods Records

It is noted that the JBS (2009) report did not include a WorkCover search of the Stored Chemical Information Database (SCID). However, the following information in relation to underground storage tanks (USTs) and above ground storage tanks (ASTs) across the site was provided in JBS (2009):

“A guided tour of the site was conducted by Greg Hankins of AQIS, who had been employed at the site for approximately 2 years. The presence of a former UST and the former AST were confirmed by Mr Hankins, but the precise location and date of removal was unknown. Mr Hankins confirmed the location of the current AST.

The incinerator in the Horse Complex was previously used to incinerate used animal bedding and used wooden crates. The resultant ash was then mixed with horse manure and sawdust and spread over the Back Paddock. The incinerator is no longer used and horse manure is currently sold to mushroom growers as fertiliser. During the inspection of the Back Paddock, there was no visual evidence of the ash/ manure/sawdust mix which had reportedly been spread in this location.

A Trade Waste Permit was held from Sydney Water for the operation of the grease traps in the central and eastern portions of the site. No further detail was made available regarding this permit”

3.5 Australian and NSW Heritage Records

A search of the Australian Heritage Trust database and the NSW Heritage Inventory was undertaken in the previous assessment (JBS 2009). The report indicated that there are no registered heritage items at the site.

3.6 Previous Investigations

3.6.1 Environmental Due Diligence Program – Phase 2 (DASCEM 2001)

DASCEM (2001) conducted a Phase 2 environmental investigation at the site with objectives to identify and assess potential environmental issues, remediate the fuel storage tanks and to develop Environmental Management Plans (EMPs) to assist AQIS in the management of these issues;

The following was noted in the report:

- Unexploded ordnances (UXO) from a potential World War 2 grenade range may be potential contaminants at the site;
- Hydrocarbon contamination associated with a diesel AST (identified within DASCEM 1999⁹) may remain at the site. The AST was relocated within a bunded area, and the identified contaminated soil was disposed offsite, and validation sampling conducted of the resultant excavation;

⁹ *Environmental Audit and Management Plan: Australian Quarantine and Inspection Service, Eastern Creek, NSW. DASCEM Report CL 420-24, November 1999 (DASCEM 1999)*

- The abandoned UST was removed and the excavation validated in accordance with NSW EPA (1994) guidelines;
- No contamination was identified associated with effluent and surface waters drainage into the settling ponds;
- The incinerator used for destroying quarantine wastes was identified at the site. The waste generated was reportedly less than the annual limit for which a licence would be required under the NSW *Protection of the Environment Operations* legislation; and
- Pesticides used in the plant quarantine area were identified as a potential concern. A surface soil sample collected from the area did not report any elevated organochlorine or organophosphate pesticides (OCP/OPPs).

No activities were identified on adjoining properties which may have an adverse impact on the site. The adjacent cemetery was noted to be downgradient, so any potential groundwater contamination associated with the cemetery was unlikely to impact upon the site.

Prior to relocation, the AST was not bunded and located adjacent to a kerb and gutter approximately 5 m up gradient from a stormwater drain. The former AST location was approximately 10 m north of the current location within the bund. Validation samples collected reported TPH and BTEX below the laboratory limit of reporting (LOR), with one exception. TPH impact was identified extending west from the former AST, beyond the adjacent kerb and gutter. Impacted soil was considered likely to be shallow, extending no deeper than 0.3 m. The highest concentration of TPH was 2900 mg/kg which was above the *Contaminated Sites: Guidelines for Assessing Service Station Sites*, NSW EPA, 1994 (EPA 1994). Lead and PAHs were not included in the validation sample analysis.

The 10 KL UST was installed circa 1980 for the storage of leaded fuel. The UST was decommissioned in 1987 by emptying fuel and backfilling with water. On removal in 2001, the tank was reportedly in good condition with welding intact and no visible holes. Validation samples collected reported TPH and BTEX below the laboratory LOR. Lead was not included in the validation sample analysis.

A survey was conducted of hazardous materials at the site, and an EMP included to aid in management of asbestos, lead based paint products, PCBs, nickel-cadmium (NiCd) batteries and Dangerous Goods.

Asbestos sheeting in reasonable condition was identified in the Animal Quarantine buildings, generally under the eaves. Lead based paint was identified in numerous buildings across the site, including the Bee House, kennels, catteries, Plant Quarantine and the Horse Surgery. Lead based paint was generally noted to be in fair (peeled in some sections) to good condition. Potential PCBs were identified in capacitors in the Horse Surgery and in the catteries. NiCd batteries were identified in 17 Emergency Exit light fittings across the site.

The following relevant¹⁰ Dangerous Goods were identified at the site:

- Diesel AST at Building 58;
- Chemical store at Building 37, including 20 L drums of acetone, Roundup, oils and herbicides, fungicide, 200 L drums of unleaded petrol and various containers of different chemicals; and

¹⁰ It is noted that a number of Dangerous Goods were not considered relevant to the current investigation, including propane and LPG cylinders, oxygen and nitrous oxide cylinders.

- Insecticide, formaldehyde, caustic soda and potassium permanganate stored in Building 34.

3.6.2 Temporary Grenade Range (G-tek 2003)

G-tek (2003) conducted a review of historical information from National Archives, discussions with Defence personnel and an inspection of aerial photos circa 1942. A Temporary Grenade Range was constructed in 1942 in the vicinity of the site, although the actual location of the range was not certain. Based on the investigation, G-tek determined that the Temporary Grenade Range was not located within the site, but was identified to be located approximately 300 yards west of the site. Thus there was considered to be no potential for unexploded ordinance to be present at the site.

3.6.3 Phase 1 Environmental Site Assessment (JBS 2009)

JBS completed a Phase 1 ESA for Industrial Commercial Property Solutions (ICPS) at the site. The phase 1 indicated that the site was partially cleared rural land until the 1980s, when the Quarantine Station was built.

The identified AECs were ranked according to the potential risk for widespread contamination associated with that area of concern. The areas are shown in Table 3.2 below

Table 3.2 AECs and COPCs identified (JBS 2009)

Section	Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPCs)	Risk Ranking		
			High	Med.	Low
Entire site	Current and former buildings across the site	Heavy metals, OCP/OPPs, asbestos			✓
	Fill material in various locations across the site	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
	Former rural use of the site	Heavy metals, OCPs			✓
Plant Quarantine Station	Greenhouses and steel shed	Metals, OCP/OPPs, herbicides			✓
	Electric sterilizing unit with minor staining beneath it	TPH/BTEX, PAHs			✓
Animal Quarantine Station	Storage shed in the AQS section	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, asbestos, herbicides			✓
Horse Complex	Grease trap	TPH			✓
	Disused incinerator	Heavy metals, PAHs		✓	
	Tractor and 200 L diesel storage area	TPH/BTEX, PAHs		✓	
Machinery Sheds	Diesel AST	TPH/BTEX, PAHs	✓		
	Former diesel AST 10 m north of current location, including identified hydrocarbon impact under adjacent kerb and guttering to the west	TPH/BTEX, PAHs	✓		
	Former leaded petrol UST	Lead, TPH/BTEX, PAHs	✓		
	Storage sheds, including bunded area in northern shed containing a diesel generator and three diesel storage drums, and storage areas for herbicides, fungicides, formaldehyde and other chemicals	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, asbestos, herbicides, VOCs, dioxins, furans		✓	
Back Paddock	Surface water and sediment in the settling pond	Heavy metals, TPH, OCP/OPPs			✓
	Dumped waste material west of the settling pond	Heavy metals, PAHs, asbestos			✓
	Burnt material in the northern portion	Heavy metals, PAHs			✓
	Surface soils where ash/manure/sawdust material was formerly spread	Heavy metals, PAHs			✓

The report concluded that a site investigation be completed at the site.

3.7 Integrity Assessment

The information obtained from the previous investigation sources reviewed has been found to be in general agreement. It is therefore considered that the information provided in this historical assessment has an acceptable level of accuracy.

4 Conceptual Site Model

4.1 Potential Areas of Environmental Concern

Based on the history review and field observations from the site, and from environmental assessments previously undertaken within the site, general areas of environmental concern have been categorised and are presented in (Table 4.1.).

Table 4.1 Areas of Environmental Concern and Associated Contaminants of Potential Concern

Section	Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPCs)	Risk Ranking ¹		
			High	Med	Low
Site Entrance	Residences in the northeastern portion of the site	Heavy metals, OCP/OPPs, asbestos			✓
Plant Quarantine Station	Plant Quarantine Station office	Heavy metals, OCP/OPPs, asbestos			✓
	Greenhouses and steel shed	Metals, OCP/OPPs, herbicides			✓
	Electric sterilizing unit with minor staining beneath it	TPH/BTEX, PAHs			✓
Animal Quarantine Station	Animal Quarantine Station office and demountables	Heavy metals, OCP/OPPs, asbestos			✓
	Storage shed in the AQS section	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, asbestos, herbicides			✓
	Fill material in the vicinity of the in-ground swimming pool	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
Bee House	Brick building in the Bee House section	Heavy metals, OCP/OPPs, asbestos			✓
	Fill material along the eastern section boundary	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
Dog Detector Unit	Brick kennels	Heavy metals, OCP/OPPs			✓
	Former shed on the eastern site boundary	Heavy metals, asbestos			✓
Dog/Cat	Dog/Cat office	Heavy metals, OCP/OPPs			✓
	Kennels, catteries	Heavy metals, OCP/OPPs			✓
Horse Complex	Horse stables and round buildings	Heavy metals, asbestos			✓
	Fill material in the northeastern corner of the section	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
	Former buildings near the western section boundary	Heavy metals, OCP/OPPs, asbestos			✓
	Administration buildings and horse surgery	Heavy metals, OCP/OPPs, asbestos			✓
	Grease trap	TPH			✓
	Disused incinerator	Heavy metals, PAHs, dioxins, furans		✓	
	Tractor and 200 L diesel storage area	TPH/BTEX, PAHs		✓	
Machinery Sheds	Diesel AST	TPH/BTEX, PAHs	✓		
	Former diesel AST 10 m north of current location, including identified hydrocarbon	TPH/BTEX, PAHs	✓		

Section	Area of Environmental Concern (AEC)	Contaminants of Potential Concern (COPCs)	Risk Ranking ¹		
			High	Med	Low
	impact under adjacent kerb and guttering to the west				
	Former leaded petrol UST	Lead, TPH/BTEX, PAHs	✓		
	Storage sheds, including bunded area in northern shed containing a diesel generator and three diesel storage drums, and storage areas for herbicides, fungicides, formaldehyde and other chemicals	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, asbestos, herbicides, VOCs		✓	
Back Paddock	Fill material in the vicinity of the settling pond, as well as east of the former building	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
	Surface water and sediment in the settling pond	Heavy metals, TPH, OCP/OPPs			✓
	Former building east of the pumping station, and former buildings along the southern site boundary	Heavy metals, OCP/OPPs, asbestos			✓
	Dumped waste material west of the settling pond	Heavy metals, PAHs, asbestos			✓
	Burnt material in the northern portion	Heavy metals, PAHs			✓
	Surface soils where ash/manure/sawdust material was formerly spread	Heavy metals, PAHs			✓
Whole site	Fill material historically imported to level the site	Heavy metals, TPH/BTEX, PAHs, OCP/OPPs, PCBs, asbestos		✓	
	Former rural use of the site	Heavy metals, OCPs			✓

¹ Risk Ranking is based on the likelihood of widespread impact associated with AEC and COPCs (JBS 2009).

4.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Fill material;
- Natural soils;
- Sediments;
- Surface water; and
- Groundwater.

Fill material has been identified across the site, particularly in the embankments of the settling pond in the south western portion. The source of fill material may have come from local sources, however also may have originated from offsite industrial activities. Based on this, the fill material underlying the site has been identified as a potentially contaminated medium. Based on the potential leachability of the contaminants in the fill, vertical migration of contaminants through the fill into the underlying natural soils may occur.

Surface soils (fill or natural) are considered potentially contaminated based on the current and historical uses of the site, as well as dumped material identified in portions of the site.

Sediments in the settling pond are identified as potentially contaminated media based on the use of the pond to 'settle' out particulate matter collected within water from across the site. As such, sediments tend to collect contaminants such as heavy metals which can stick to colloidal particles, as well as contaminants which are less soluble (eg OCPs). However,

the sediment within the settling pond were not investigated as part of this assessment due to access restrictions.

Surface water is identified as a potentially contaminated medium based on the drainage channel through the central portion of the site, the creek in the western portion, and the settling pond in the south western corner of the site.

However, surface water has not been directly assessed as part of this investigation. An assessment of the surface water would have been completed should contamination been observed within the soils present at the site.

Groundwater is identified as a potentially contaminated medium due to the presence of an AST and a former UST at the site, as well as historical site activities, the likely shallow nature of groundwater in the area (**Section 2.8**) and the large unsealed areas at the site.

However, groundwater has not been directly assessed as part of this investigation as the previous reports indicated that the USTs had been removed and groundwater would only be assessed if gross contamination had been identified within the soils at the site.

4.3 Potential for Migration

Contaminants generally migrate from site via a combination of windblown dusts, rainwater infiltration, groundwater migration and surface water runoff. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid/liquid and mobility characteristics);
- The extent of the contaminants (isolated or widespread);
- The location of the contaminants (surface soils or at depth); and
- The site topography, geology, hydrology and hydrogeology.

The potential contaminants identified as part of the site history review and site inspection includes solids (eg. asbestos) and liquids (ie. diesel).

The site is generally sealed or covered with healthy grass or other vegetation, reducing the potential for windblown contaminants to migrate from the site. However, the buildings at the site potentially contain asbestos. Consequently, the exposed asbestos may weather and produce friable asbestos and therefore the potential for windblown dust contamination increases.

There is potential for contaminants to migrate via surface water flow run off from the site, given the drainage channel through the site, as well as the creek in the western portion. It is noted that water used in cleaning quarantine facilities (kennels, catteries, etc) is pumped to the settling pond, which overflows into the creek in the western portion of the site.

Rainfall infiltration at the site is expected to be significant and this indicates a potential for vertical contaminant migration through the surface soils. Based on regional hydrogeological information, there is the potential for shallow groundwater within the clay/shale formation. Hence, there is a potential migration pathway via groundwater flow.

5 Sampling and Analytical Plan

5.1 Data Quality Objectives

Data quality objectives (DQOs) are statements that define the confidence required in conclusions drawn for data produced for a project, and which must be set to realistically define and measure the quality of data needed.

DQOs were developed for the investigations, as discussed in the following sections.

5.1.1 State the Problem

The site is to be marketed for sale for future commercial/industrial use, and an environmental assessment is required for Due Diligence purposes.

5.1.2 Identify the Decision

Based on the decision making process for assessing urban redevelopment sites detailed in DEC (2006¹¹), the following decisions were made:

- Are there any unacceptable risks to likely future onsite receptors from soil at the site?
- Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues?
- Is there any evidence of, or potential for, of contaminants migrating offsite?
- Is a site management strategy required?

5.1.3 Identify Inputs to the Decision

Inputs to the decisions were:

- Information provided in the investigations;
- Geological data including observations of the presence of building materials or other waste materials that may contain ACM, staining, odours and discolouration of the soil media;
- Soil environmental data within different fill/soil types to be collected by soil sampling and analysis;
- Soil criteria to be achieved on the site as based on a proposed future landuse as defined by assessment criteria prepared in **Section 6**; and
- Confirmation that data generated by sample analysis are of an acceptable quality to allow reliable comparison to assessment criteria by assessment of quality assurance/ quality control as per the data quality indicators established in **Section 5.1.6**.

¹¹ *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 2nd Edition*, NSW EPA, 2006 (DEC 2006).

5.1.4 Define the Study Boundaries

The site is legally identified as Lot 1 DP1040948 and occupies an area of approximately 22 ha.

The vertical extent of the soil investigation was anticipated to be to a maximum depth of 2.5 m or 0.5 m into natural materials or prior refusal or reach of excavator/backhoe/hand auger, whichever was the shallower.

Due to the nature of potential contaminants identified and project deadline requirements, factors including seasonality and other temporal variables were not assessed as part of this investigation. The temporal boundaries of this investigation were limited to the period of field investigation during September 2013.

5.1.5 Develop a Decision Rule

Soil analytical data were assessed against EPA endorsed criteria including:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1) (NEPC 2013); and*
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 2nd edition NSW EPA, April 2006 (DEC 2006).*

For asbestos, consideration will also be given to the definition of asbestos contaminated soil presented in 'How to Manage and Control Asbestos in the Workplace Code of Practice', December 2011, Safe Work Australia (SWA 2011¹²).

Where EPA endorsed criteria are not currently available (i.e. VOCs) such compounds will initially be assessed against the laboratory LOR as an initial screening level.

As for soils, where specific NSW EPA endorsed criteria are not available, the laboratory LOR will be adopted as an initial screening criterion.

The decision rules adopted to answer the decisions identified in **Section 5.1.2** are summarised in **Table 5.1**.

¹² To facilitate regulatory enforcement, SWA (2011) was subsequently re-issued under the same cover by NSW WorkCover as an approved Code of Practice under section 271 of the NSW *Work Health and Safety Act*, 2011. Henceforth the document is referenced in this document as SWA 2011/NSW WorkCover 2011.

Table 5.1 Summary of Decision Rules

Decisions Required to be Made	Decision Rule
Are there any unacceptable risks to onsite future receptors from soils?	Soil analytical data will be compared against EPA endorsed criteria. Statistical analyses of the data in accordance with relevant guidance documents will be undertaken where appropriate, to facilitate the decisions. The following statistical criteria was adopted with respect to soils: Either: the reported concentrations were all below the site criteria; Or: the 95% upper confidence limit (UCL) of the average concentration for each analyte was below the adopted site criterion; no single analyte concentration exceeded 250% of the adopted site criterion; and the standard deviation of the results was less than 50% of the site criterion. If the statistical criteria stated above are satisfied, the answer to the decision will be No. If the statistical criteria are not satisfied, the answer to the decision will be Yes.
Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?	Where identified, laboratory analysis results for natural soils considered not to be impacted by site conditions are to be compared with published background concentrations (NEPC 1999). If the 95% UCL of individual contaminants in natural soils exceed the published background concentrations, the answer to the decision was Yes. Otherwise, the answer to the decision will be No.
Are there any chemical mixtures?	Was there more than one group of contaminants present which increases the risk of harm? If there is, the answer to the decision was Yes. Otherwise, the decision was No.
Are there any aesthetic issues?	If there are any unacceptable odours, soil discolouration, ACM fragments in surface soils or other aesthetic concerns identified, the answer to the decision was Yes. Otherwise, the answer to the decision was No.
Is there any evidence of, or potential for, migration of contaminants migrating off-site?	Were contaminants present at concentrations exceeding published EPA endorsed criteria in the soil then further assessment will be required.
Is a site management strategy required?	Is the answer to any of the above decisions Yes? If yes, a site management strategy will be required to be developed. If no, a site management strategy is not required.

5.1.6 Specify Limits of Decision Error

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

Specific limits for this project have been adopted in accordance with the appropriate guidance from the NSW EPA, NEPC (2013), appropriate indicators of data quality (DQIs used to assess quality assurance / quality control) and standard JBS&G procedures for field sampling and handling.

To assess the usability of the data prior to making decisions, the data will be assessed against pre-determined Data Quality Indicators (DQIs) established for the project as discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS parameters). The acceptable limit on decision error is 95% compliance with DQIs.

The DQIs and data assessment criteria are summarised in **Table 5.2**.

- **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 5.2 Summary of Quality Assurance / Quality Control Program

Data Quality Indicators	Frequency	Data Quality Criteria
Precision		
Split duplicates (intra laboratory)	1 / 20 samples	<50% RPD ¹
Blind 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	70-130%
Matrix spikes	1 per lab batch	70-130%
Representativeness		
Sampling appropriate for media and analytes	All samples	-
Samples extracted and analysed within holding times.	-	Soil: organics (14 days), inorganics (6 months)
Laboratory Blanks	1 per lab batch	<LOR
Trip spike	1 per lab batch	70-130% recovery
Storage blank	1 per lab batch	<LOR
Rinsate sample	1 per sampling event/media	<LOR
Comparability		
Standard operating procedures for sample collection & handling	All Samples	All Samples
Standard analytical methods used for all analyses	All Samples	NATA accreditation
Consistent field conditions, sampling staff and laboratory analysis	All Samples	All samples ²
Limits of reporting appropriate and consistent	All Samples	All samples ²
Completeness		
Sample description and COCs completed and appropriate	All Samples	All samples ²
Appropriate documentation	All Samples	All samples ²
Satisfactory frequency and result for QC samples		95% compliance
Data from critical samples is considered valid	-	Critical samples valid
Sensitivity		
Analytical methods and limits of recovery appropriate for media and adopted site assessment criteria	All samples	LOR<= site assessment criteria

If any of the DQIs were not met, further assessment was necessary to determine whether the non-conformance significantly affected the usefulness of the data. Corrective actions might have included requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of data.

5.1.7 Optimise the Design for Obtaining Data

Various strategies for developing a statistically based sampling plan are identified in EPA (1995), including judgemental, random, systematic and stratified sampling patterns. Based on known site activities, a systematic grid was identified as the preferred approach for assessing for the potential site contamination.

The *Contaminated Sites: Sampling Design Guidelines* (EPA 1995) does not provide guidance for sites larger than 5 Ha. However, a stratified approach is recommended. Based on the findings of the most recent preliminary investigation (JBS 2009), identified AECs will be sampled according to their relative risk and potential for widespread contamination.

5.2 Soil Sampling Methodology

Soil samples were collected from test pits advanced with an excavator within the moderate to high risk areas. Soil bores were advanced within the former UST and current AST areas, the soil bores were advanced using a Geoprobe drill rig, with push tubes. Additionally, with the low risk areas hand augers were used to collect the samples. Samples were generally

collected from soils at the surface (0-0.1 m) and then 0.5 m intervals to a maximum depth of 2 m or 0.5 m into natural materials or prior refusal.

During the collection of soil samples, features such as seepage, discolouration, staining, odours and other indicators of contamination were noted on the borehole logs (**Appendix B**). Collected soil samples were immediately transferred to laboratory supplied sample jars or polyethylene ziplock bags. The sample containers were labelled, sealed and transferred to an esky for sample preservation prior to and during shipment. A chain-of-custody form was completed and forwarded with the samples to the testing laboratory.

Not all soil samples collected were analysed. Samples were analysed in accordance with the analytical schedule (**Section 5.5**). All samples will remain at the primary laboratory for a period of two months if future analysis is required following the receipt of sample results, provided analytes are within holding times.

5.3 Decontamination

Prior to the commencement of sampling activities, non-disposable sampling equipment, including the sampling trowel/knife were all cleaned with a high pressure water/detergent spray, rinsed with water and then air dried. The equipment was then inspected to ensure that no soil, oil, debris or other contaminants were apparent on the equipment prior to the commencement of works. Sampling equipment was subsequently decontaminated using the above process between each sampling location.

5.4 Duplicate and Triplicate Sample Preparation

At selected sample points sufficient soil sample was collected using sampling methods described in **Section 5.2** to provide primary, duplicate and triplicate samples. The collected sample was large enough to be divided into three samples to complete the primary, duplicate and triplicate samples. The samples were placed in three clean glass jars or sample bags as appropriate.

Each sample was then labelled with primary, duplicate or triplicate sample identification before being placed in the same chilled esky for transport to the laboratory. In addition, one trip spike and storage blank were also analysed for the batches.

5.5 Laboratory Analyses

JBS&G contracted Envirolab Services Pty Ltd (Envirolab) as the primary laboratory for the required analyses. The secondary laboratories for the works were ALS Environmental (ALS) and Pickford & Rhyder (for asbestos). All laboratories are NATA registered for the required analyses. In addition, the laboratories were required to meet JBS&G's internal QA/QC requirements. Laboratory analysis of samples was conducted as summarised in **Table 5.3**. Copies of the laboratories Certificates of Analysis are provided in **Appendix C**.

Table 5.3 Analytical Schedule

Sample Type	Risk Ranking/ Sampling Rate	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	High (1 sample location per 8.5 m grid space)	12 soil bore locations (nominally 4 locations targeting each of the high risk AECs)	Lead – 6 samples PAHs – 20 samples TPH/BTEX – 20 samples
	Medium (Targeted locations on top of Low Risk sampling grid)	22 test pit locations and 9 boreholes	Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn) – 30 samples PAHs – 35 samples TPH/BTEX – 30 samples VOCs – 3 samples Herbicides (phenoxy acid, triazine) – 5 samples Asbestos – 11 samples OCPs/OPPs – 13 samples PCBs – 10 samples
	Low risk areas in operational parts of the site and the back paddock	70 hand auger locations	Heavy metals – 34 samples PAH – 13 samples TPH/BTEX – 11 samples Asbestos – 4 samples OCPs/OPPs – 21 samples PCBs – 5 samples Herbicides (phenoxy acid, triazine) – 5 samples Fe – 11 samples Organic Matter – 5 samples CEC – 5 samples pH – 5 samples

6 Assessment Criteria

6.1 Regulatory Guidelines

The investigation was undertaken with consideration to aspects of the following guidelines, as relevant:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), National Environment Protection Council (NEPC 2013).*
- *Contaminated Sites: Guidelines for Assessing Service Station Sites, NSW EPA, 1994 (EPA 1994).*
- *Contaminated Sites: Sampling Design Guidelines, NSW EPA, 1995 (EPA 1995)*
- *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, NSW EPA, 1997 (OEH 2011).*
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme, 2nd Edition, NSW EPA, 2006 (DEC 2006).*
- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites, Australian and New Zealand Environment and Conservation Council and the National Health and Medical Research Council, 1992 (ANZECC/NHMRC 1992).*
- *Contaminated Sites: Guidelines on Duty to Report Contamination under the Contaminated Land Management Act 1997, NSW DECC, June 2009 (DECC 2009).*

6.2 Soil Assessment Criteria

Based on the proposed development details and in accordance with the decision process for assessment of urban redevelopment sites (DEC 2006), concentrations of contaminants in the soil will be compared against published levels as presented in **Tables 6.1, 6.2 and 6.3**, sourced from the following:

- Health based Investigation Levels for Commercial/industrial, including premises such as shops, offices, factories and industrial sites – NEPC 2013, HIL D;
- Health Screening Levels (HSLs) for vapour intrusion, fine grained soil for Commercial/industrial at various depths (NEPC 2013); and
- Ecological Screening Levels for Commercial/industrial, fine grained soils (NEPC 2013).

Where there are no NSW EPA endorsed thresholds (i.e. individual VOC compounds), the laboratory limit of detection has been adopted as an initial screening value for the purposes of this assessment.

Table 6.1 Health Based Soil Investigation Criteria and Hydrocarbon Management Limits (all units in mg/kg)

	Limit of Reporting	Laboratory Method	Health Investigation/ Screening Levels	
			Recreational/ Open Space HIL-C	Commercial industrial HIL-D
Metals				
Arsenic	4.0	ICP-AES (USEPA 200.7)	300	3000
Cadmium	0.4	ICP-AES (USEPA 200.7)	90	900
Chromium	1.0	ICP-AES (USEPA 200.7)	300 ¹	3600 ¹
Copper	1.0	ICP-AES (USEPA 200.7)	17 000	240000
Nickel	1.0	ICP-AES (USEPA 200.7)	1200	6000
Lead	1.0	ICP-AES (USEPA 200.7)	600	1500
Zinc	1.0	ICP-AES (USEPA 200.7)	30 000	400000
Mercury (inorganic)	0.1	Cold Vapour ASS (USEPA 7471A)	80 ²	730 ²
POLYCYCLIC AROMATIC HYDROCARBONS				
Carcinogenic PAHs (as B(a)P TPE) ³	0.028	GCMS (USEPA8270)	3	40
Total PAHs ⁴	0.4	GCMS (USEPA8270)	300	4000
BTEX				
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	NL ⁵	3 ⁵
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	NL ⁵	NL ⁵
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	NL ⁵	NL ⁵
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	NL ⁵	230 ⁵
TOTAL RECOVERABLE HYDROCARBONS				
F1 C ₆ -C ₁₀	10	TPH Purge Trap-GCMS (USEPA8260)	NL ⁶	260 ⁶
F2 >C ₁₀ -C ₁₆	50	TPH Purge Trap-GCMS (USEPA8260)	NL ⁶	NL ⁶
F3 >C ₁₆ -C ₃₄	100	Purge Trap-GCFID (USEPA8000)	-	-
F4 >C ₃₄ -C ₄₀	100	Purge Trap-GCFID (USEPA8000)	-	-
ORGANOCHLORINE PESTICIDES				
DDT + DDD + DDE	0.3	GCECD (USEPA8140,8080)	400	3600
Aldrin + Dieldrin	0.2	GCECD (USEPA8140,8080)	10	45
Chlordane	0.1	GCECD (USEPA8140,8080)	70	530
Endosulfan	0.3	GCECD (USEPA8140,8080)	340	2000
Endrin	0.1	GCECD (USEPA8140,8080)	20	100
Heptachlor	0.1	GCECD (USEPA8140,8080)	10	50
HCB	0.1	GCECD (USEPA8140,8080)	10	80
Methoxychlor	0.1	GCECD (USEPA8140,8080)	400	2500
PCBs				
Total PCBs	0.7	GCECD (USEPA8140,8080)	1	7
PCE	1.0	Purge Trap-GCMS (USEPA8260)	40	8
TCE	1.0	Purge Trap-GCMS (USEPA8260)	0.4	0.08
Cis 1,2 DCE	1.0	Purge Trap-GCMS (USEPA8260)	2	0.3
VC	1.0	Purge Trap-GCMS (USEPA8260)	0.5	0.1
Other				
Asbestos	Presence	PLM / Dispersion Staining	No asbestos capable of being detected via the investigation, which comprises both visual identification and sample analysis by a NATA accredited laboratory	

Notes:

1. Guideline values presented are for Chromium (VI) in absence of total Chromium values. Where total Chromium results are elevated, samples will be analysed for Chromium (VI).
2. Guideline values are for inorganic mercury. Where elevated mercury concentrations are encountered and/or site information suggests the potential presence of elemental mercury and/or methyl mercury, consideration of applicability would be needed.
3. Carcinogenic PAHs calculated as per Benzo(a)pyrene Toxicity Equivalent Factor requirements presented in NEPC (2013)
4. Total PAHs calculated as per requirements presented in NEPC (2013).
5. Management Limits are based on coarse grained soil, with F1 and F2 concentrations inclusive of naphthalene and BTEX compounds.
6. Soil Health Screening Levels for Vapour Intrusion: Sand Soils. Values presented are those for 0 to <1 m bgs as the most conservative level. Reference should be made to results tables for further detail of levels at greater depths. NL: Non-limiting.
7. Values for F1 C₆-C₉ are obtained by subtracting BTEX (Sum) from laboratory result for C₆-C₉ TRH. Naphthalene is not subtracted as there is separate limits for Naphthalene.
8. No EPA endorsed criteria, The LOR is proposed as a screening level in the absence of endorsed site specific criteria.

Additionally, the laboratory results will be compared against ecological screening levels (ESLs) for petroleum hydrocarbons and derived ecological investigation levels (EILs) for other COPC for urban residential and public open space scenarios outlined in the NEPC (2013).

The procedure for the derivation of the EILs includes the use of added contaminant limits (ACL) as reported in NEPC (2013). The NEPC (2013) method also includes an ambient background concentration (ABC), and assumes the ecosystem is adapted to the ABC for that locality, as such it is only adding contaminants over and above this ABC which has a potentially adverse effect. The ABC at a site is considered the sum of naturally occurring background and contaminant levels introduced from diffuse or non-point sources by general anthropogenic activities such as vehicle emissions, rather than contaminant levels introduced by industrial or agricultural activities.

To derive EILs for selected inorganic COPC the pH, cation exchange capacity (CEC) and approximate percent clay content for the site must be known. Samples were collected to determine these parameters in soils at the site. Based on this information the following criteria for copper, lead and zinc were derived.

Table 6.3 Derived EIL criteria of copper, lead and zinc (mg/kg)

pH	CEC	Component	Cu	Pb	Zn	Cr
5.6 pH units	10 meq/100 g	ABC ¹	25	18	59	18
		ACL ²	190	1800	280	310
		EIL (ABC + ACL)	215	1818	339	328

Notes:

- 1 Ambient background concentration (ABC), calculated for this site as the average concentration of a particular metal in all soil samples analysed.
- 2 Added contaminant limits (ACL), from data in Tables 1B (1) to 1B (5) in NEPC (2011) based on pH and/or CEC values and/or public open space land use for relevant metals.

Works have been completed in accordance with the decision process for assessment of urban redevelopment sites (DEC 2006).

Table 6.2: Ecological Based Soil Criteria (all units in mg/kg)

	Limit of Reporting	Laboratory Method	ESLs/EILs
			Commercial and industrial
Metals			
Arsenic	4.0	ICP-AES (USEPA 200.7)	160
Cadmium	0.4	ICP-AES (USEPA 200.7)	-
Chromium	1.0	ICP-AES (USEPA 200.7)	328
Chromium (VI)	1.0	Alkali leach colorimetric (APHA3500-Cr/USEAP3060A)	-
Copper	1.0	ICP-AES (USEPA 200.7)	215
Nickel	1.0	ICP-AES (USEPA 200.7)	55
Lead	1.0	ICP-AES (USEPA 200.7)	1818
Zinc	1.0	ICP-AES (USEPA 200.7)	339
Mercury (inorganic)	0.1	Cold Vapour ASS (USEPA 7471A)	-
PAHs			
Benzo(a)pyrene	0.5	GCMS (USEPA8270)	1.4
Naphthalene	0.1	GCMS (USEPA8270)	370
BTEX			
Benzene	1.0	Purge Trap-GCMS (USEPA8260)	75
Toluene	1.0	Purge Trap-GCMS (USEPA8260)	135
Ethylbenzene	1.0	Purge Trap-GCMS (USEPA8260)	165
Total Xylenes	3.0	Purge Trap-GCMS (USEPA8260)	180
TPH			
F1 C ₆ -C ₁₀	10	TPH Purge Trap-GCMS (USEPA8260)	215 ¹
F2 >C ₁₀ -C ₁₆	50	TPH Purge Trap-GCMS (USEPA8260)	170 ²
F3 >C ₁₆ -C ₃₄	100	Purge Trap-GCFID (USEPA8000)	1700
F4 >C ₃₄ -C ₄₀	100	Purge Trap-GCFID (USEPA8000)	3300
OCPs			
DDT	0.1	GCECD (USEPA8140,8080)	640

Notes:

1. Values for F1 C₆-C₉ are obtained by subtracting BTEX (Sum) from laboratory result for C₆-C₉ TRH.
2. Values for F2 >C₁₀-C₁₆ are obtained by not subtracting naphthalene from laboratory result for >C₁₀-C₁₆ TRH due to no values
3. SQG derived using site specific data as presented in Table 6 using NEPC (2013) methodology.
4. Value for Chromium (III) adopted for evaluation of total Chromium in the absence of known Chromium (VI) source.

Quality Assurance/ Quality Control

6.3 QA/QC Results

The QA/QC results for soil samples collected at the site are summarised in **Table 7.1** and discussed in **Section 7.2**. Detailed QA/QC results are included the laboratory reports in **Appendix D**.

Table 7.1 - Soil QA/QC Results Summary

Data Quality Indicator	Results	DQI met?
Precision		
Soil Blind duplicates (intra laboratory)	0-72% RPD The primary and duplicate samples targeting asbestos were in agreement. Duplicate samples were analysed at a rate of 1/20 primary samples.	Partial ¹
Soil Blind triplicates (inter laboratory)	0-78% RPD The primary and triplicate samples targeting asbestos were in agreement. Triplicate samples were analysed at a rate of 1/20 primary samples.	Partial ¹
Laboratory Duplicates	0 – 71% RPD At least 13 laboratory duplicate was completed for each batch of samples.	Partial ¹
Accuracy		
Surrogate spikes	67 - 137% recovery Surrogate spikes were completed for all organic samples.	Partial ¹
Matrix spikes	67 - 140% recovery 8 matrix spikes - recovery was completed for each batch of samples.	Yes
Representativeness		
Sampling appropriate for media and analytes	All sampling conducted in accordance with JBS&G procedures	Yes
Laboratory blanks	<LOR	Yes
Samples extracted and analysed within holding times.	All samples were extracted and analysed within holding times.	Yes
Trip spike	100-105% 4 trip spikes accompanied soil samples collected	Yes
Storage blank	<LOR 4 storage blanks accompanied soil samples collected	Yes
Rinsate blank	<LOR 3 rinsate blanks accompanied soil samples collected	Yes
Comparability		
Standard operating procedures used for sample collection & handling	The field staff members used same standard operating procedures throughout works	Yes
Standard analytical methods used	Standard analytical methods used as listed in 5.3	Yes
Consistent field conditions, sampling staff and laboratory analysis	Sampling was conducted by a primary field staff member using standard operating procedures in the same conditions throughout the works. The primary lab 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 & COCs completed	All bore logs and COCs were completed appropriately.	Yes
Appropriate documentation	All appropriate field documentation is included in the Appendices.	Yes
Satisfactory frequency/result for QC samples	The QC results are considered adequate for the purposes of the investigation.	Yes
Data from critical samples is considered valid	Data from critical samples is considered valid.	Yes

¹ See discussion of DQI exceedances in **Section 7.2**.

6.4 QA/QC Discussion

6.4.1 Precision

Blind and Split Duplicates

Soil field blind (intra-laboratory) duplicates and split (inter-laboratory) duplicates were collected at a rate of 1 per 20 primary samples analysed, meeting the 1/20 DQI frequency (for blind duplicates) and the 1/20 DQI frequency (for split duplicates).

No high RPD calculations were observed between the primary, blind duplicate and triplicate soil samples, with the exception of elevated RPD calculations for some metals and cation results. The elevated RPD calculations for the soil blind and split duplicates may be attributed to the heterogeneous nature of the fill present at the site and the non-conformances do not influence the outcomes of the report due to no samples being above the adopted site criteria.

Laboratory Duplicates

All concentrations in the primary and duplicate samples were less than the laboratory limits of reporting, or returned RPD values were within the acceptable limits of 0 – 50%, with the exception of nickel (71 %), zinc (53 %) and iron (59 %). Given the consistency of other laboratory duplicate RPDs indicates that these results do not affect the precision of the dataset.

6.4.2 Accuracy

Surrogate Spikes

Surrogate samples analysed reported recoveries within the acceptable range with the exception of 12 surrogates for TCMX (131-137 %), 1 surrogate for o-Terphenyl (68 %), and 1 surrogate for 4- Bromofluorobenzene (67 %). However, the laboratory considers that for organic contaminants the acceptable range is between 60-140 % and therefore the exceedances of the RPD are considered acceptable.

Matrix Spikes

Matrix spikes analysed reported recoveries outside the RPD range in 13 samples, with recoveries between 137-140 % for some volatile COCPs. However, the laboratory considers that for organic contaminants the acceptable range is between 60-140 % and therefore the exceedances of the RPD are considered acceptable.

Laboratory Control Samples

Laboratory control samples analysed reported recoveries outside the acceptable range in 8 samples. However, the laboratory considers that for organic contaminants the acceptable range is between 60-140 % and therefore the exceedances of the RPD are considered acceptable. The accuracy of the analytical results is therefore acceptable.

6.4.3 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 sampling was conducted with the advancement of test pits, considered appropriate for the potential site contaminants.

All sampling was completed by trained and experienced field scientists. The current soil investigation was completed by Ben Regan. Ben has 2 years' experience in the contaminated land industry, has a Bachelor of Engineering (Environmental) from the

University of Wollongong and has received internal training on the appropriate sampling techniques for soil sampling.

Ben was assisted in the field by Michael Greenwood, a graduate field scientist with Bachelor of Science, majoring in Environmental Earth Science from the University of New South Wales and has received internal training at JBS&G in appropriate field sampling techniques.

Laboratory Blanks

Analysis of a method blank was conducted for the laboratory batches. No target analytes were detected above the laboratory limit of reporting (LOR) within any of the laboratory blanks.

Holding Times

The extraction and analysis of selected soil samples was completed within the recommended holding times.

Rinsate

Three rinsate samples were collected following decontamination of all non-disposable soil sampling equipment. All analyte concentrations in the rinsate blank were below the laboratory LOR.

Trip Spike

Four trip spike were submitted with the batch of soil samples collected during the assessment. All trip spike recoveries were within the limits specified in the representativeness DQIs.

Storage Blank

Four storage blanks were submitted with the batches of soil samples collected during the assessment. There were no reported concentrations of TPH/BTEX compounds above the laboratory LOR.

6.4.4 Comparability

Trained and experienced JBS&G personnel undertook all sampling in accordance with standard JBS&G sampling methods.

Field works and sampling were undertaken by two experienced JBS&G field scientists.

The laboratory LORs are consistent and are considered appropriate.

6.4.5 Completeness

Samples were transported under full chain of custody (COC) documentation. The COC documentation was completed correctly and the selected analyses were correctly conducted.

All field documentation was completed appropriately and were correct.

The frequency of analysis and result for all QC samples are appropriate.

6.4.6 Sensitivity

Laboratory analysis methods for all contaminants in soil adopted during the investigation used limits of reporting significantly less than the site assessment criteria to ensure that contaminant concentrations could be confidently identified as being less than the adopted site assessment criteria.

6.5 QA/QC Assessment

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

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.

While several recoveries and RPD's fell outside the DQI limit, the non-conformances described in **Section 7.2** are considered to be acceptable due to factors such as consistency of the remaining data, many results falling within the NATA accredited range and results significantly below the adopted site assessment criteria.

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

7 Soil Results

7.1 Field Observations

Field activities were completed on 24th to 30th September 2013. Several material types were encountered. Borehole logs are included in **Appendix B**. Observations made during the current assessment are summarised below.

Anthropogenic inclusions of bituminous gravels were identified in silty clay fill material across the site within the surface soils. Topsoil was observed across the majority of the site over the fill material was observed to extend from 0.0 m to 2.3 m below ground surface (bgs), where natural sand was encountered. Generally the fill material extended from the beneath the topsoil to between 0.5 to 1 m, with deeper fill material observed within the former UST area.

Natural soils were encountered underlying the fill material and typically comprised orange to grey clay encountered at depths ranging from 0.2 m to 2.5 m bgs. On average the natural material was encountered between 0.5 to 1 m.

No staining and no odours were observed in any of the sample locations.

Each soil sample collected was screened with a photoionisation detector (PID). No levels of volatile organic compounds (VOCs) were recorded.

Non-friable ACM was not identified at the surface or in the fill material and no friable asbestos was observed during the intrusive works.

7.2 Soil Analytical Results

The soil sampling locations are shown on **Figure 3** and summarised laboratory results are presented in **Table A**. Detailed laboratory reports and chain of custody documentation are provided in **Appendix C**.

Analytical results are discussed in the following sections.

7.2.1 Metals

The concentrations of the heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn) in the soil samples selected for analysis were all less than the adopted health based criteria or ecological based criteria.

7.2.2 TPH

There were no reported concentrations of TPH C₁₀-C₄₀ above the adopted site criteria.

Concentrations in all other soil samples were below the adopted site criteria.

7.2.3 BTEX

There were no reported concentrations of BTEX compounds above the laboratory limit of reporting (LOR) within any of the analysed soil samples.

7.2.4 PAHs

All total PAH concentrations were below the adopted site assessment criteria.

All B(a)P concentrations were below the adopted site health based and ecological based assessment criteria.

All naphthalene concentrations were below the adopted site health based and ecological based assessment criteria.

7.2.5 OCPs and PCBs

There were no OCP or PCBs reported above the adopted site health based and ecological based assessment criteria in any soil sample collected and analysed.

7.2.6 VOCs

There were no VOCs reported above the laboratory LOR in any soil sample collected and analysed.

7.2.7 Herbicides

There were no herbicides reported above the laboratory LOR in any soil sample collected and analysed.

7.2.8 Asbestos

Non-friable asbestos consisting of ACM fragments was not identified in any of the soil samples collected or analysed during the ESA. ACM was not observed during the intrusive investigations.

There were no asbestos fibres, including respirable fibres, detected at or above the laboratory LOR of 0.1 g/kg in any of the other soil samples collected and analysed.

8 Site Characterisation

The results are discussed in the following section in relation to the identified decisions developed as part of the DQO process (**Section 5.1.2**). Based on the decision making process for assessing urban redevelopment sites detailed in DECC (2006), the following decisions must be made:

- Are there any unacceptable risks to likely future onsite receptors from soil at the site?
- Are there any issues relating to the local area background soil concentrations that exceed appropriate soil criteria?
- Are there any impacts of chemical mixtures?
- Are there any aesthetic issues?
- Is there any evidence of, or potential for, of contaminants migrating offsite?
- Is a site management strategy required?

8.1 Potential Risks to Future Onsite Receptors

The concentrations of contaminants of concern were not reported above the health based criteria or ecological based criteria adopted for the site at any of the locations sampled during the current investigation. No non-friable or friable ACM was observed at the site.

Based on these results the potential risk to future on site receptors for a commercial/industrial land-use scenario is considered to be low.

8.2 Background Soil Concentrations

Soil samples collected from the natural soils was submitted for analysis for selected COPCs. Metal concentrations in the natural material are consistent with the NEPM (1999) background soil concentrations ranges.

8.3 Chemical Mixtures

There were no potential chemical mixtures identified during the investigation that may pose a contamination issue at the site.

8.4 Aesthetics

There was no indication of staining or odours identified in the soil during the current investigation and no ACM was observed within the soil at the site.

8.5 Potential Migration of Contaminants

Given the above lines of evidence, with concentrations of COPCs in the soil were reported below the adopted site criteria, the potential for groundwater to pose an unacceptable risk to human and ecological health, either on-site or at a down gradient receptor was considered to be low.

8.6 Site Management Strategy

Based on the current investigation and long term management plan is not required for the continued use of the site under commercial/industrial landuse scenarios.

9 Conclusions and Recommendations

9.1 Conclusions

Based on the findings of this investigation and subject to the limitations in **Section 11**, the following conclusions were made:

- Concentrations of all COPCs identified for the site were reported below the adopted criteria for commercial/industrial health based criteria (HIL-D) and ecological based criteria for commercial/industrial landuse;
- Non-friable ACM was not observed during the current investigation, with friable asbestos not being reported any soil samples;
- Some of the buildings present at the site may contain asbestos containing materials and/or lead paint.

9.2 Recommendations

It is recommended that a hazardous building materials survey be completed for the buildings present at the site. The results of the assessment indicate that under the current condition of site, it is suitable for continued commercial/industrial landuse. The site is to be divested in 2015, the results of this assessment should be reviewed then to understand if they data and conclusions are still valid.

10 Limitations

This report has been prepared for use by the client who 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 report has been prepared specifically for the client for the purposes of the commission. No warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

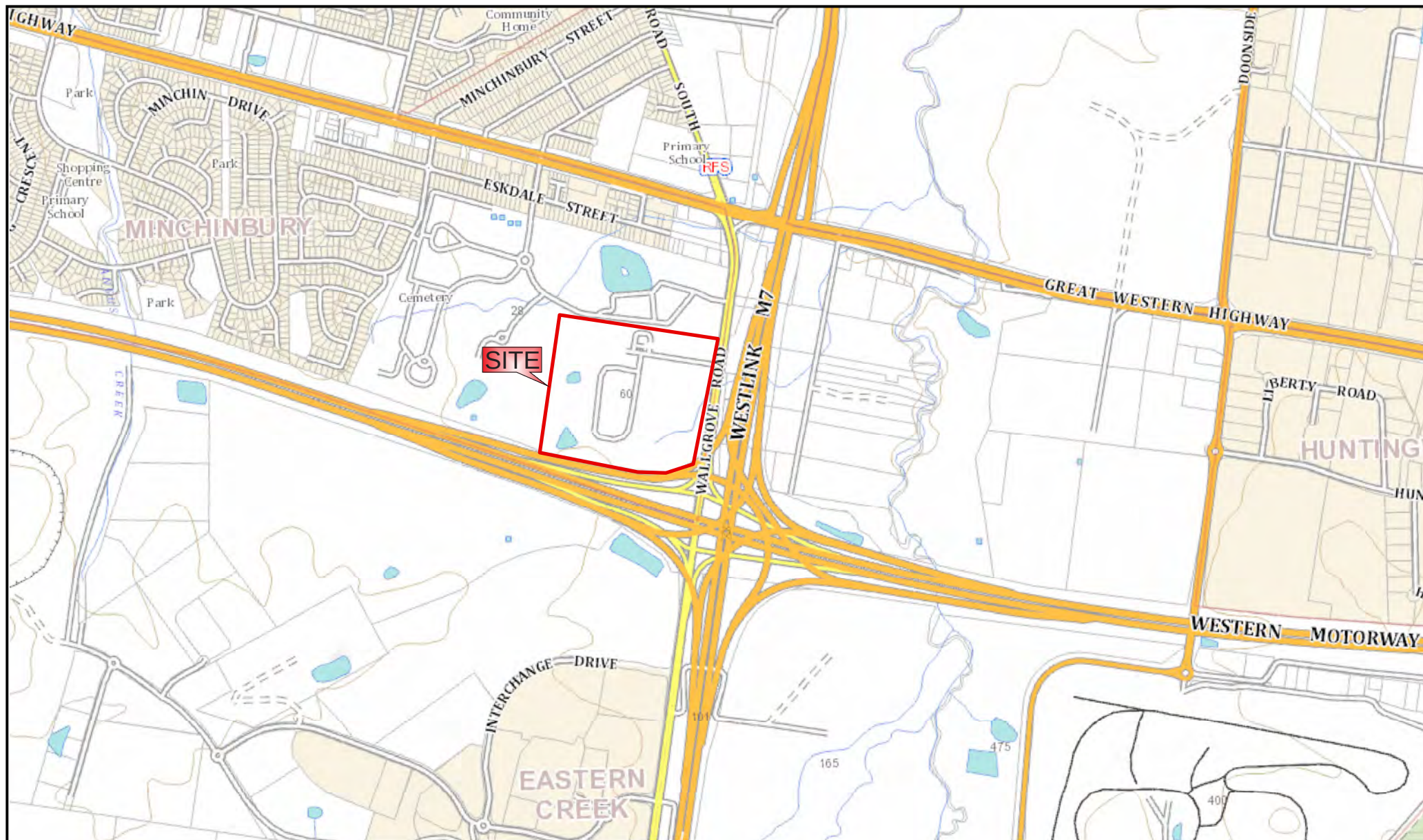
The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G (NSW & WA) Pty Ltd.

Limited sampling and laboratory analyses were undertaken as part of the investigations reviewed, 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 (NSW & WA) Pty Ltd reserves the right to review the report in the context of the additional information.

Figures



Source: Base Image - © Six Maps www.maps.six.nsw.gov.au Accessed: 19/09/2013

© 2013 JBS&G

0 180 360 720 m			
Scale: 1:16,500			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
A	Original Issue - R01	LL	19-09-2013
Rev	Description	Drm.	Date:

Legend:
 Approximate Site Area

JBS&G Figure 1: Site Location

Client: Colliers International

Project: Eastern Creek Quarantine Station

Job No: 43002

File Name: 43002_01





Source: Base Image - © Six Maps www.maps.six.nsw.gov.au Imagery Date: 13/04/2011 Accessed: 19/09/2013

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0 37.5 75 150 m			
Scale: 1:3,500			
Datum: GDA 1994 MGA Zone 56 - AHD			
A4			
A	Original Issue - R01	SE	31-10-2013
Rev	Description	Dm.	Date:

Legend:
 Approximate Site Area

JBS&G Figure 2: Site Layout

Client: Colliers International

Project: Eastern Creek Quarantine Station

Job No: 43002

File Name: 43002_02





Source: © Base Image Six Maps www.maps.six.nsw.gov.au Imagery Date: 13/04/2011 Accessed: 19/09/2013

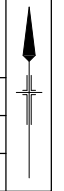
© 2012 JBS Environmental Pty Ltd

0 4.5 9 18 m			
Scale: 1:600			
Datum: MGA94 Zone 56 - AHD			
A3			
A	Original Issue - R01	SE	23-10-2013
Rev	Description	Dm.	Date

Legend:
Approximate Site Area
Sample_Locations

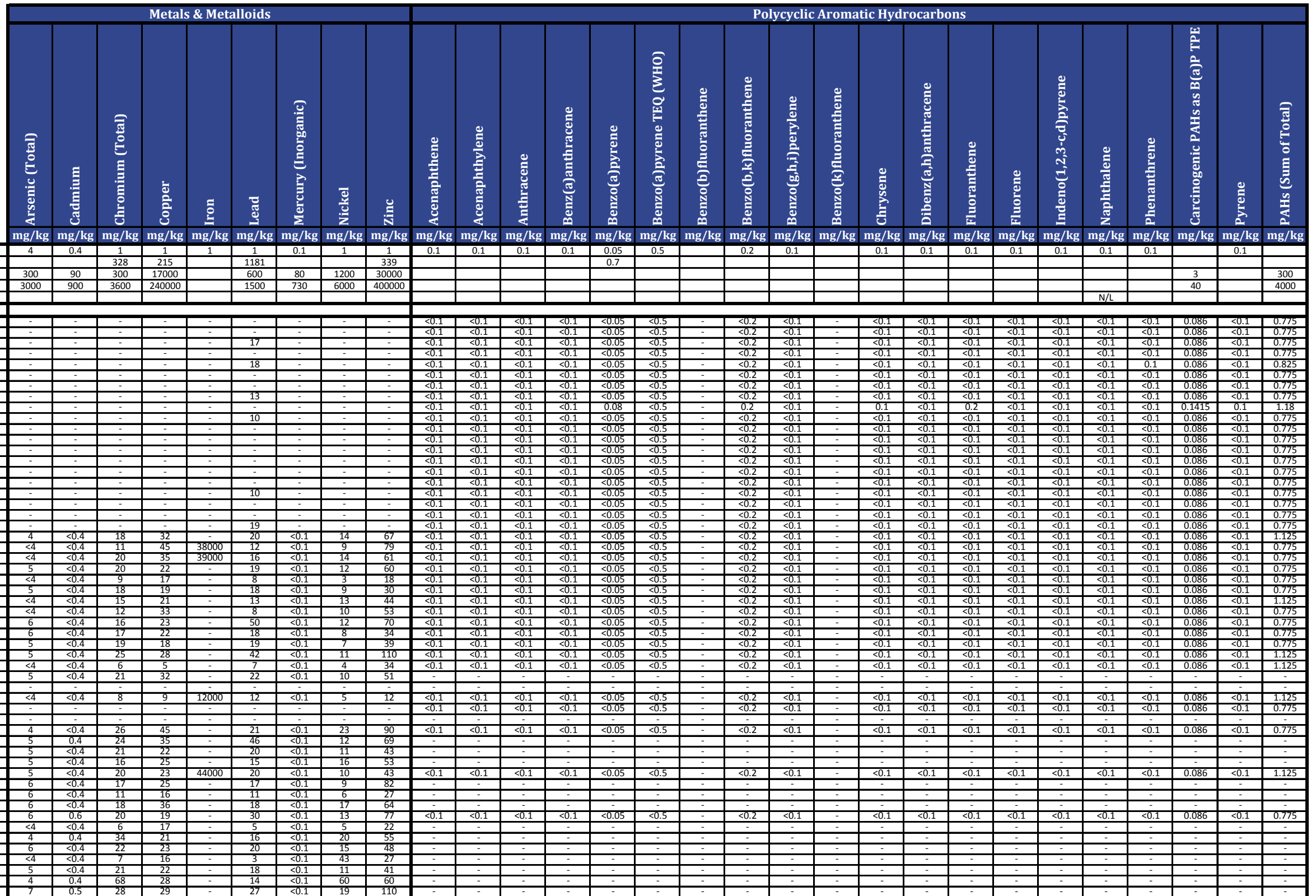
JBS&G Figure 3: Sample Locations

Client: Colliers International
Project: Eastern Creek Quarantine Station
Job No: 43002 File Name: 43002_03



Tables

Project Name: Eastern Creek Quarantine Station (Table 1 of 8)





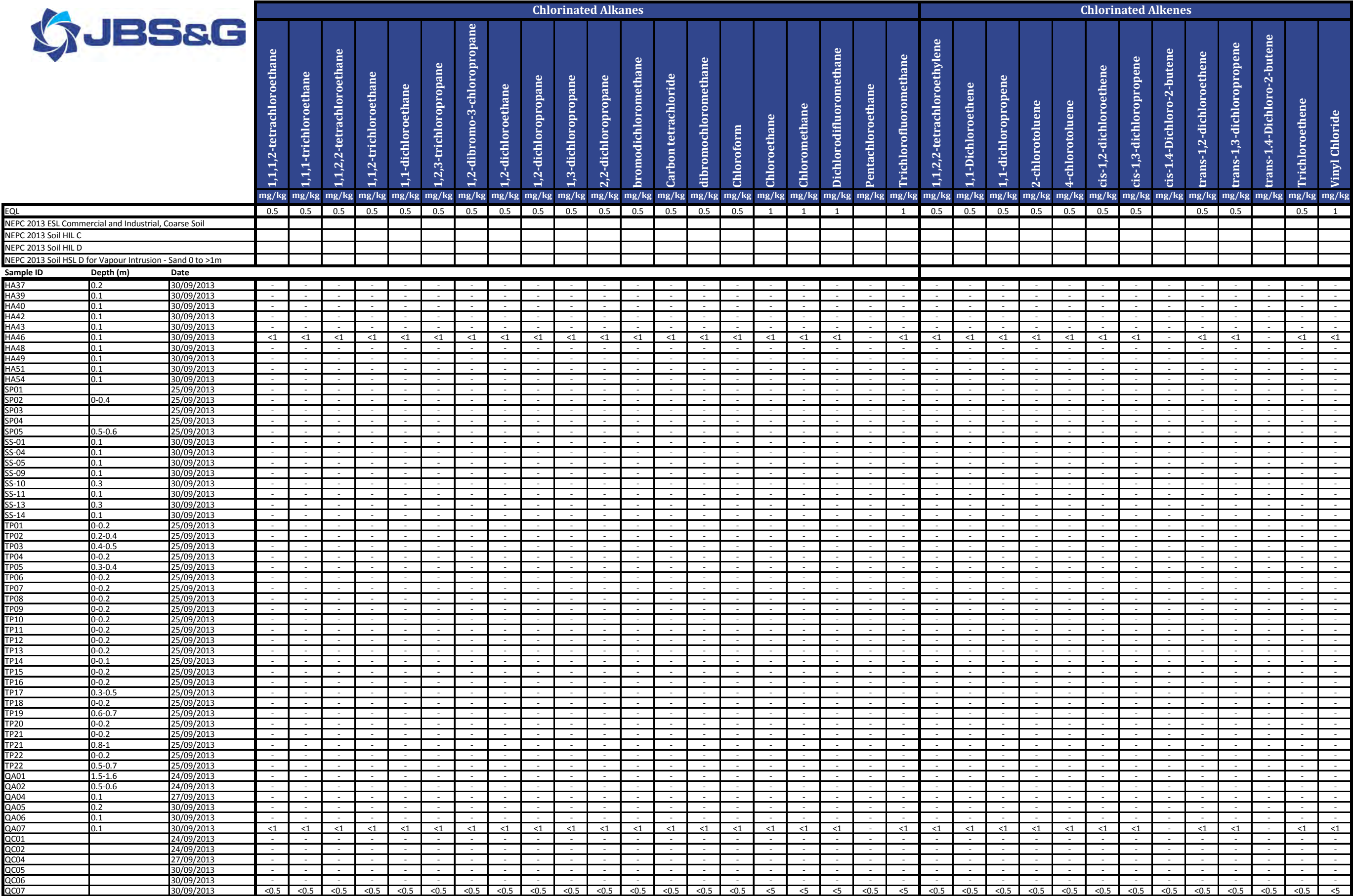
			Metals & Metalloids									Polycyclic Aromatic Hydrocarbons																				
			Arsenic (Total)	Cadmium	Chromium (Total)	Copper	Iron	Lead	Mercury (Inorganic)	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TEQ (WHO)	Benzo(b)fluoranthene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Carcinogenic PAHs as B(a)P TPE	Pyrene	PAHs (Sum of Total)	
																																mg/kg
EQL			4	0.4	1	1	1	0.1	1	1	0.1	0.1	0.1	0.1	0.05	0.5		0.2	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1			
NEPC 2013 ESL/EIL Commercial and Industrial					328	215		1181			339				0.7																	
NEPC 2013 Soil HIL C			300	90	300	17000		600	80	1200	30000																		3		300	
NEPC 2013 Soil HIL D			3000	900	3600	240000		1500	730	6000	400000																		40		4000	
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																										N/L						
Sample ID	Depth (m)	Date	7	<0.4	28	15	-	32	<0.1	9	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA39	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35	
HA40	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA42	0.1	30/09/2013	8	0.4	26	19	50000	25	<0.1	11	39	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
HA43	0.1	30/09/2013	8	0.4	23	25	-	27	<0.1	13	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA46	0.1	30/09/2013	<4	<0.4	16	23	33000	17	<0.1	10	45	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
HA48	0.1	30/09/2013	7	<0.4	21	17	-	22	<0.1	9	31	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
HA49	0.1	30/09/2013	6	<0.4	21	26	-	24	<0.1	11	47	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	0.775
HA51	0.1	30/09/2013	5	<0.4	11	8	12000	22	<0.1	5	22	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	0.775
HA54	0.1	30/09/2013	7	<0.4	23	23	40000	23	<0.1	11	50	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	0.775
SP01		25/09/2013	<4	<0.4	5	67	-	6	<0.1	6	31	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
SP02	0-0.4	25/09/2013	<4	<0.4	16	36	-	10	<0.1	87	63	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
SP03		25/09/2013	<4	<0.4	12	19	-	11	<0.1	13	31	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
SP04		25/09/2013	4	<0.4	21	29	-	18	<0.1	11	56	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
SP05	0.5-0.6	25/09/2013	<4	<0.4	7	12	-	8	<0.1	10	25	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
SS-01	0.1	30/09/2013	<4	<0.4	15	21	-	23	<0.1	11	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-04	0.1	30/09/2013	7	<0.4	21	28	-	35	<0.1	15	590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-05	0.1	30/09/2013	6	<0.4	25	27	-	21	<0.1	18	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-09	0.1	30/09/2013	<4	<0.4	17	28	-	22	<0.1	13	360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-10	0.3	30/09/2013	6	<0.4	16	23	-	16	<0.1	8	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-11	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-13	0.3	30/09/2013	5	<0.4	18	31	-	20	<0.1	9	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SS-14	0.1	30/09/2013	7	0.4	19	28	-	23	<0.1	13	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TP01	0-0.2	25/09/2013	6	<0.4	19	25	-	21	<0.1	10	41	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
TP02	0.2-0.4	25/09/2013	5	<0.4	18	24	-	15	<0.1	8	34	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	0.775
TP03	0.4-0.5	25/09/2013	5	<0.4	17	21	27000	11	<0.1	7	28	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	0.775
TP04	0-0.2	25/09/2013	5	<0.4	20	22	-	23	<0.1	10	52	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.086	<0.1	1.125
TP05	0.3-0.4	25/09/2013	<4	<0.4	10	18	-	9	<0.1	5	32	<0.1	<0.1	<0.1	<0.1	<0.05	<0.5		<0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	&					

Project Name: Eastern Creek Quarantine Station (Table 2 of 8)

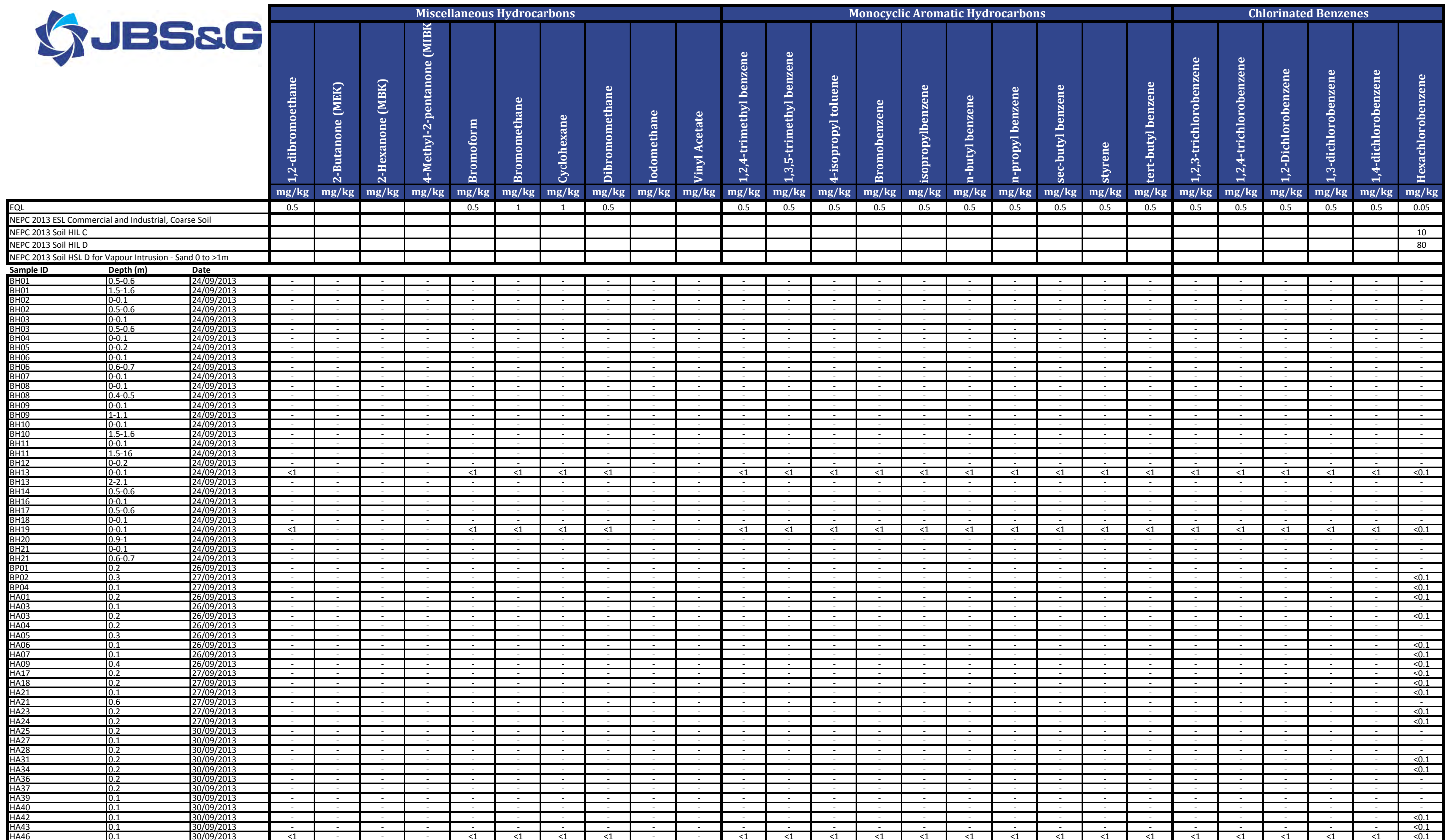




	Chlorinated Alkanes																				Chlorinated Alkenes																	
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	bromodichloromethane	Carbon tetrachloride	dibromochloromethane	Chloroform	Chloroethane	Chloromethane	Dichlorodifluoromethane	Pentachloroethane	Trichlorofluoromethane	1,1,2,2-tetrachloroethylene	1,1-Dichloroethene	1,1-dichloropropene	2-chlorotoluene	4-chlorotoluene	cis-1,2-dichloroethene	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	trans-1,4-Dichloro-2-butene	Trichloroethene	Vinyl Chloride					
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1		1	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	1						
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																																						
NEPC 2013 Soil HIL C																																						
NEPC 2013 Soil HIL D																																						
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																																						
Sample ID	Depth (m)	Date																																				
BH01	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH02	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH03	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH03	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH04	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH05	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH06	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH06	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH07	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH08	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH08	0.4-0.5	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH09	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH09	1.1-1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH10	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH10	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH11	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH11	1.5-16	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH12	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH13	0-0.1	24/09/2013	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	-	<1	<1					
BH13	2-2.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH14	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH16	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH17	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH18	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH19	0-0.1	24/09/2013	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	-	<1	<1						
BH20	0.9-1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH21	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH21	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BP01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BP02	0.3	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BP04	0.1	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA03	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA03	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA04	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA05	0.3	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA06	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA07	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA09	0.4	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA17	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA18	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA21	0.1	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA21	0.6	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA23	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA24	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA25	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA27	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA28	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA31	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA34	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
HA36	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					



Project Name: Eastern Creek Quarantine Station (Table 3 of 8)







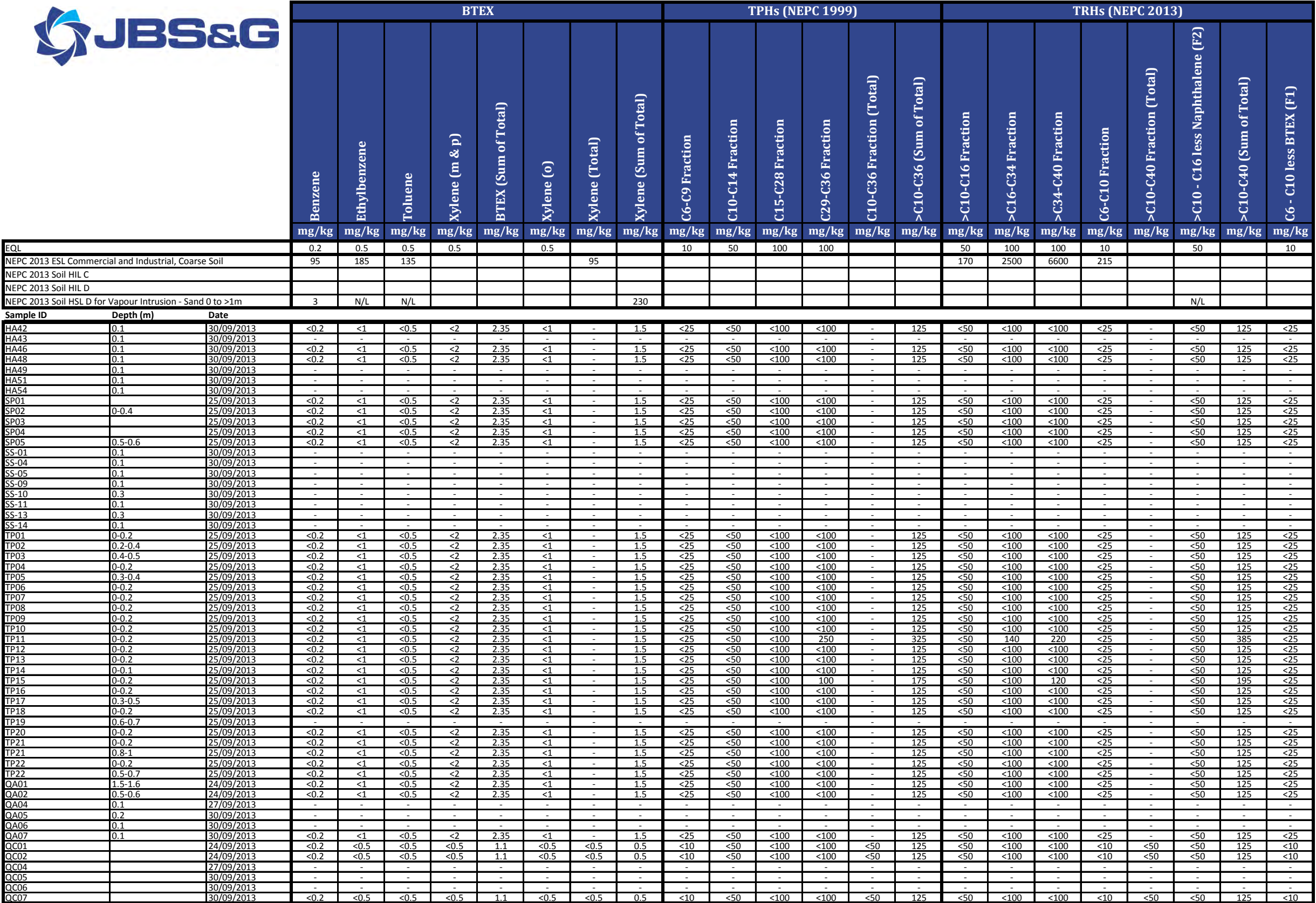
			Miscellaneous Hydrocarbons									Monocyclic Aromatic Hydrocarbons									Chlorinated Benzenes							
			1,2-dibromoethane	2-Butanone (MEK)	2-Hexanone (MBK)	4-Methyl-2-pentanone (MIBK)	Bromoform	Bromomethane	Cyclohexane	Dibromomethane	Iodomethane	Vinyl Acetate	1,2,4-trimethyl benzene	1,3,5-trimethyl benzene	4-isopropyl toluene	Bromobenzene	isopropylbenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	styrene	tert-butyl benzene	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-Dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Hexachlorobenzene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5				0.5	1	1	0.5			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																												
NEPC 2013 Soil HIL C																												10
NEPC 2013 Soil HIL D																												80
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																												
Sample ID	Depth (m)	Date																										
HA48	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
HA49	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA51	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA54	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP01		25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SP02	0-0.4	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SP03		25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SP04		25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SP05	0.5-0.6	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-01	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-04	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-05	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-09	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-10	0.3	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-11	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-13	0.3	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
SS-14	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP01	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP02	0.2-0.4	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03	0.4-0.5	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP05	0.3-0.4	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP06	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP07	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP08	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	0-0.1	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP15	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP16	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP17	0.3-0.5	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP19	0.6-0.7	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP20	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP21	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP21	0.8-1	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP22	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP22	0.5-0.7	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA04	0.1	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA05	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QA06	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA07	0.1	30/09/2013	<1	-	-	-	-	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1
QC01		24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02		24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04		27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05		30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
QC06		30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC07		30/09/2013	<0.5	<5	<5	<5	<0.5	<5	-	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Project Name: Eastern Creek Quarantine Station (Table 4 of 8)

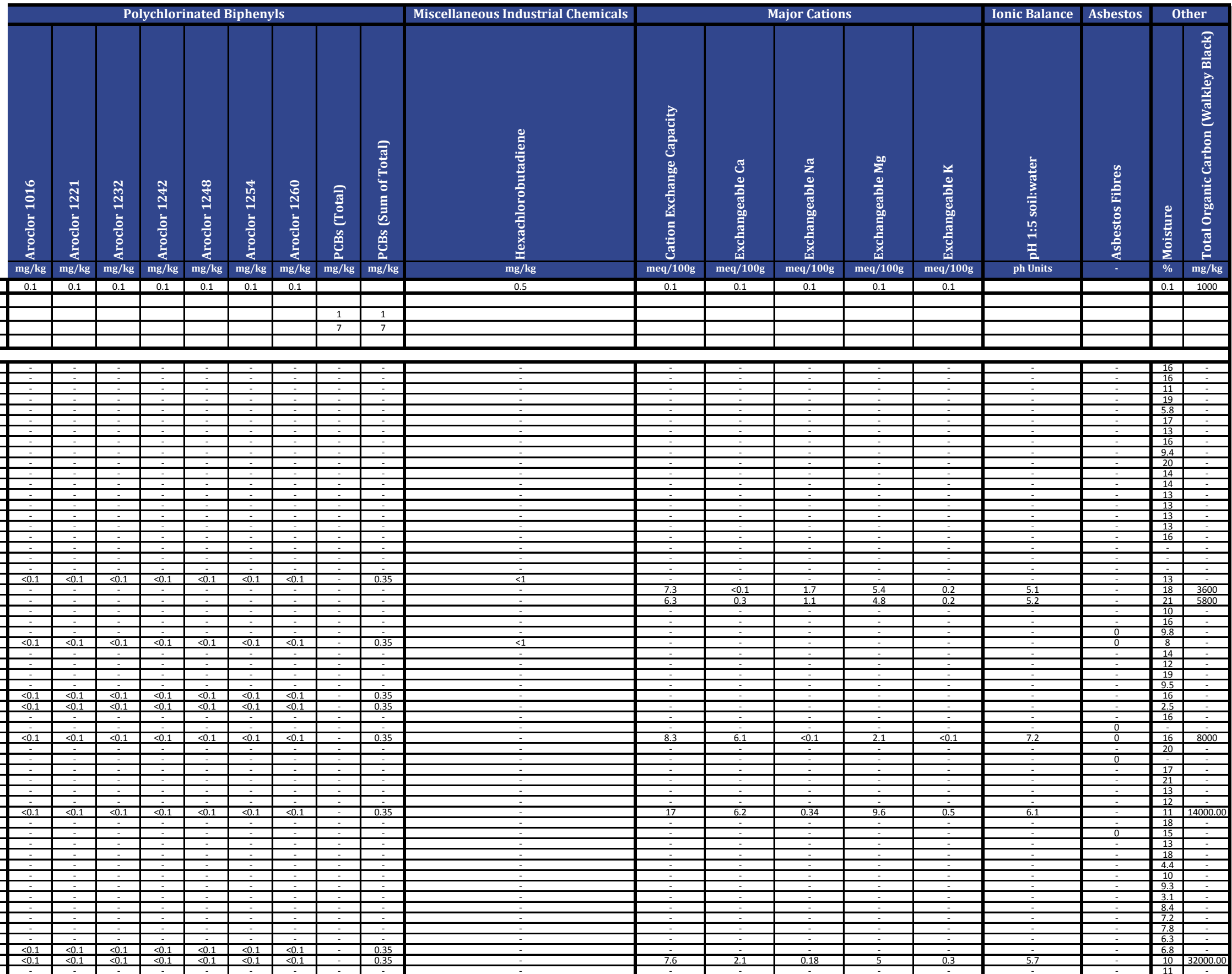




			BTEX								TPHs (NEPC 1999)						TRHs (NEPC 2013)							
			Benzene	Ethylbenzene	Toluene	Xylene (m & p)	BTEX (Sum of Total)	Xylene (o)	Xylene (Total)	Xylene (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Total)	>C10-C36 (Sum of Total)	>C10-C16 Fraction	>C16-C34 Fraction	>C34-C40 Fraction	C6-C10 Fraction	>C10-C40 Fraction (Total)	>C10 - C16 less Naphthalene (F2)	>C10-C40 (Sum of Total)	C6 - C10 less BTEX (F1)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.5	0.5	0.5		0.5			10	50	100	100			50	100	100	10		50		10
NEPC 2013 ESL Commercial and Industrial, Coarse Soil			95	185	135				95								170	2500	6600	215				
NEPC 2013 Soil HIL C																								
NEPC 2013 Soil HIL D																								
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m			3	N/L	N/L					230												N/L		
Sample ID	Depth (m)	Date	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH01	1.5-1.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH02	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH02	0.5-0.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH03	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH03	0.5-0.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH04	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH05	0-0.2	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH06	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH06	0.6-0.7	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH07	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH08	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH08	0.4-0.5	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH09	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH09	1.1-1.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH10	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH10	1.5-1.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH11	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH11	1.5-1.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH12	0-0.2	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH13	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH13	2.2-1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH14	0.5-0.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH16	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH17	0.5-0.6	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH18	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH19	0-0.1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH20	0.9-1	24/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BH21	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BP01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BP02	0.3	27/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
BP04	0.1	27/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0.2	26/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA04	0.2	26/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA05	0.3	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06	0.1	26/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA07	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA09	0.4	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA17	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA18	0.2	27/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA21	0.1	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA21	0.6	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA23	0.2	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA24	0.2	27/09/2013	<0.2	<1	<0.5	<2	2.35	<1	-	1.5	<25	<50	<100	<100	-	125	<50	<100	<100	<25	-	<50	125	<25
HA25	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA27	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA28	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA31	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA34	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA36	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA37	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA39	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA40	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Project Name: Eastern Creek Quarantine Station (Table 5 of 8)





	Polychlorinated Biphenyls									Miscellaneous Industrial Chemicals	Major Cations					Ionic Balance	Asbestos	Other				
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Total)	PCBs (Sum of Total)	Hexachlorobutadiene	Cation Exchange Capacity	Exchangeable Ca	Exchangeable Na	Exchangeable Mg	Exchangeable K	pH 1:5 soil:water	Asbestos Fibres	Moisture	Total Organic Carbon (Walkley Black)			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g	ph Units	-	%	mg/kg			
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1			0.5	0.1	0.1	0.1	0.1	0.1			0.1	1000			
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																						
NEPC 2013 Soil HIL C																						
NEPC 2013 Soil HIL D																						
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																						
Sample ID	Depth (m)	Date																				
HA46	0.1	30/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35		<1	7.2	1.5	0.28	5.1	0.3	5.6	-	13	16000.00
HA48	0.1	30/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										8.1	-
HA49	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										16	-
HA51	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										10	12000.00
HA54	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										12	19000.00
SP01		25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	8.9
SP02	0-0.4	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	5.5
SP03		25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	6.8
SP04		25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	9.2
SP05	0.5-0.6	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	4.5
SS-01	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	19
SS-04	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	10
SS-05	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	12
SS-09	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	25
SS-10	0.3	30/09/2013	-	-	-	-	-	-	-	-	-										-	12
SS-11	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	13
SS-13	0.3	30/09/2013	-	-	-	-	-	-	-	-	-										-	13
SS-14	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										0	9.9
TP01	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	11
TP02	0.2-0.4	25/09/2013	-	-	-	-	-	-	-	-	-										-	13
TP03	0.4-0.5	25/09/2013	-	-	-	-	-	-	-	-	-										-	13
TP04	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	12
TP05	0.3-0.4	25/09/2013	-	-	-	-	-	-	-	-	-										0	18
TP06	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	9.2
TP07	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	13
TP08	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	11
TP09	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										0	10
TP10	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										0	13
TP11	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	12
TP12	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	14
TP13	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	13
TP14	0-0.1	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	11
TP15	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										0	9.2
TP16	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	11
TP17	0.3-0.5	25/09/2013	-	-	-	-	-	-	-	-	-										-	17
TP18	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										-	13
TP19	0.6-0.7	25/09/2013	-	-	-	-	-	-	-	-	-										-	16
TP20	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	15
TP21	0-0.2	25/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										-	19
TP21	0.8-1	25/09/2013	-	-	-	-	-	-	-	-	-										-	19
TP22	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-										-	12
TP22	0.5-0.7	25/09/2013	-	-	-	-	-	-	-	-	-										-	15
QA01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-										-	-
QA02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-										-	19
QA04	0.1	27/09/2013	-	-	-	-	-	-	-	-	-										-	15
QA05	0.2	30/09/2013	-	-	-	-	-	-	-	-	-										-	2.9
QA06	0.1	30/09/2013	-	-	-	-	-	-	-	-	-										-	11
QA07	0.1	30/09/2013	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	0.35										-	13
QC01		24/09/2013	-	-	-	-	-	-	-	-	-										-	15.4
QC02		24/09/2013	-	-	-	-	-	-	-	-	-										-	19
QC04		27/09/2013	-	-	-	-	-	-	-	-	-										-	18.6
QC05		30/09/2013	-	-	-	-	-	-	-	-	-										-	2.7
QC06		30/09/2013	-	-	-	-	-	-	-	-	-										-	11.3
QC07		30/09/2013	-	-	-	-	-	-	<0.1	-	-										-	13.5

Table A - Soil Analytical Results

Client: Afteron

Project Number: 43002

Project Name: Eastern Creek Quarantine Station (Table 6 of 8)

			Organochlorine Pesticides																								
			Aldrin	Aldrin + Dieldrin (Sum of Total)	alpha-BHC	alpha-Chlordane	beta-BHC	delta-BHC	gamma-Chlordane	Chlordane	DDD	DDE	DDT	DDT + DDE + DDD (Sum of Total)	Dieldrin	Endosulfan	Endosulfan alpha	Endosulfan beta	Endosulfan Sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor Epoxide	Lindane	Methoxychlor	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05		0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.1		0.05		0.05	0.05	0.05	0.05	0.05		0.05	0.05	0.05	0.1	
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																											
NEPC 2013 Soil HIL C				10						70				400		340				20				10			400
NEPC 2013 Soil HIL D				45						530				3600		2000				100				50			2500
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																											
Sample ID	Depth (m)	Date																									
BH01	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH02	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH03	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH03	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH04	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH05	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH06	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH06	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH07	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH08	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH08	0.4-0.5	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH09	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH09	1-1.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH10	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH10	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH11	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH11	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH12	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH13	0-0.1	24/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
BH13	2-2.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH14	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH16	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH17	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH18	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH19	0-0.1	24/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH20	0.9-1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH21	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH21	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BP01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BP02	0.3	27/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BP04	0.1	27/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA01	0.2	26/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA03	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA03	0.2	26/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA04	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA05	0.3	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA06	0.1	26/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA07	0.1	26/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA09	0.4	26/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA17	0.2	27/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA18	0.2	27/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	0.15	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
HA21	0.1	27/09/2013	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<															



Organochlorine Pesticides

Table A - Soil Analytical Results

Client: Afteron

Project Number: 43002

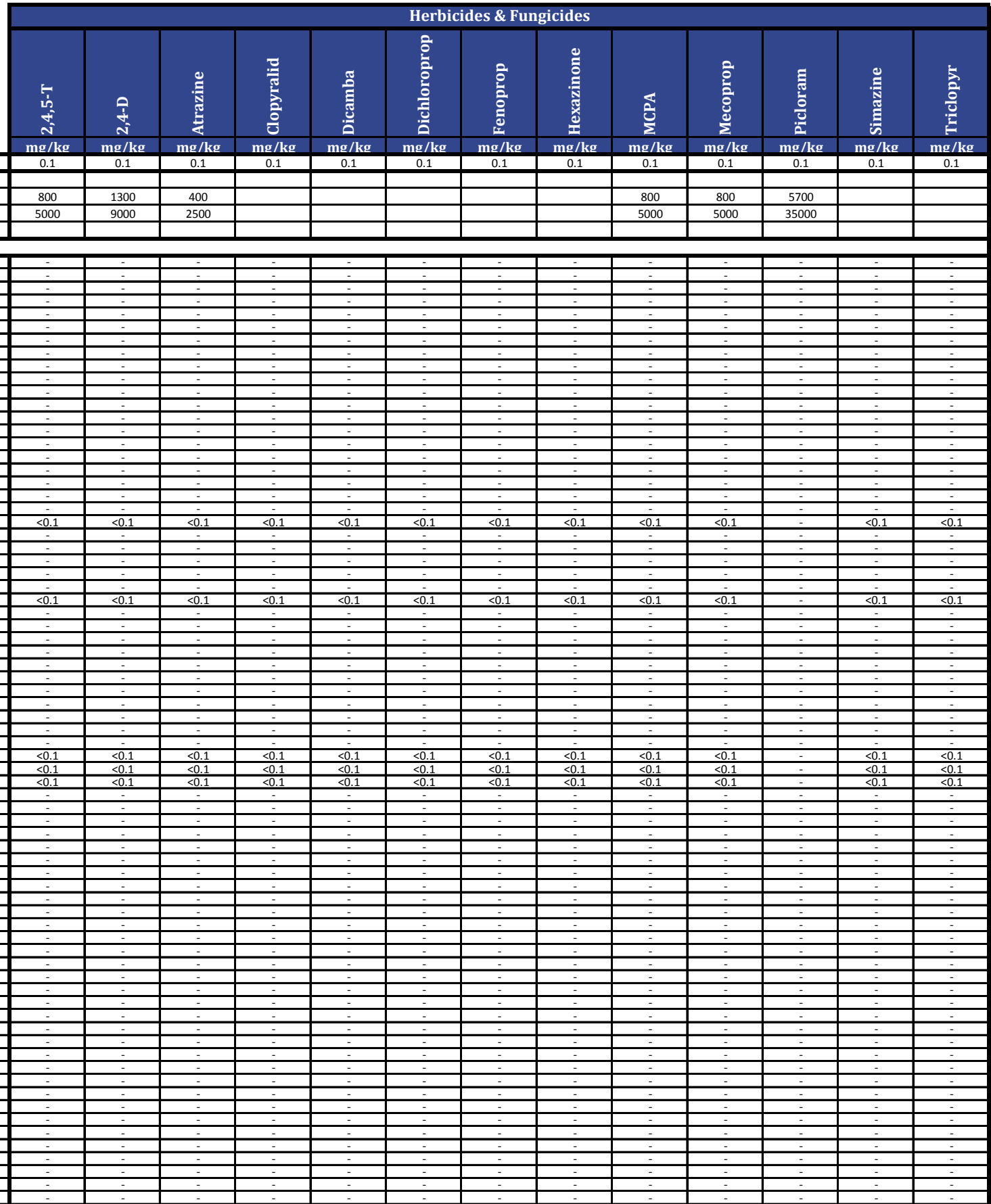
Project Name: Eastern Creek Quarantine Station (Table 7 of 8)

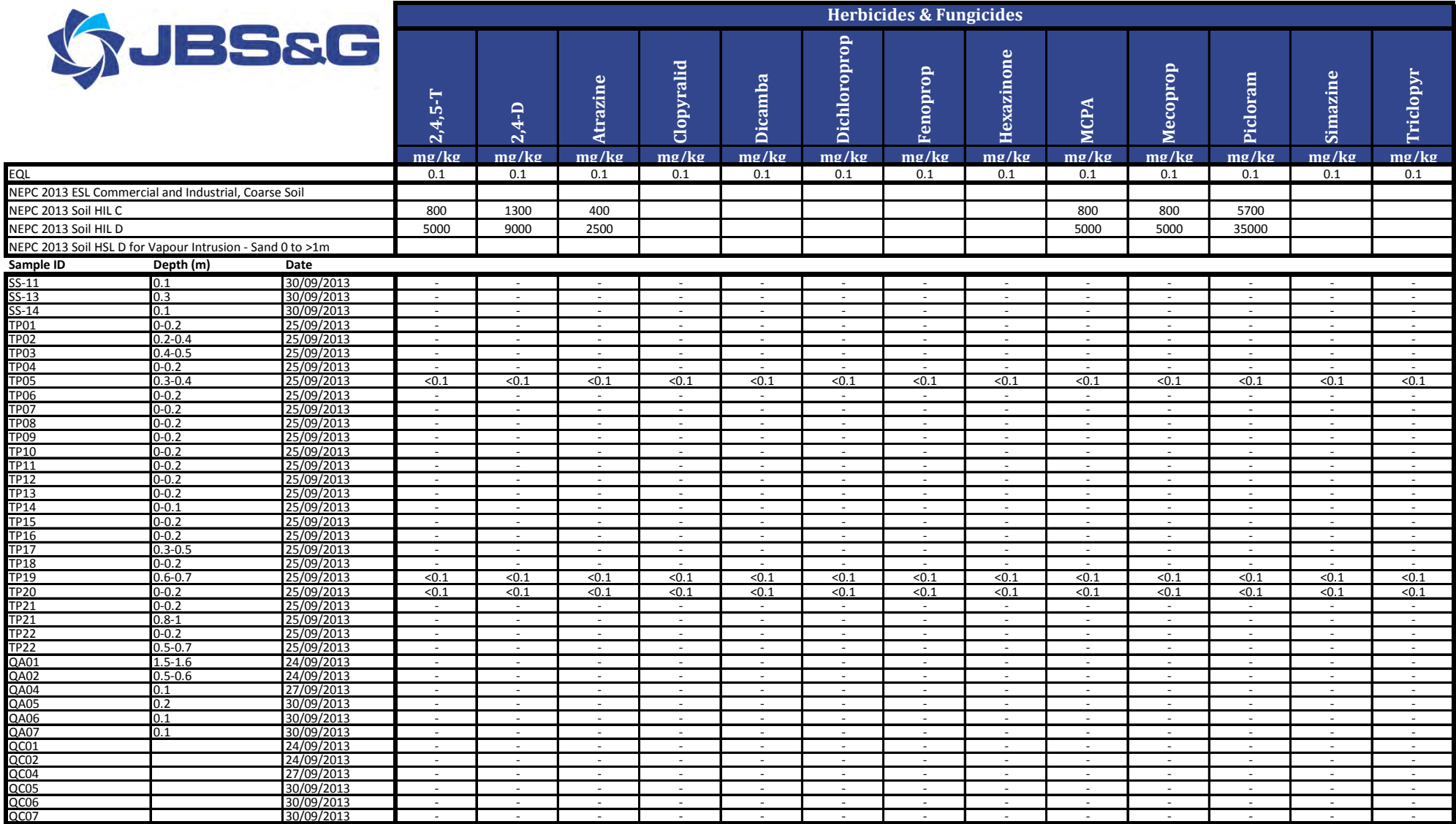
			Organophosphorus Pesticides																	
			Azinphos methyl	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Dementon-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenitrothion	Fenthion	Malathion	Monocrotophos	Parathion	Parathion methyl	Primiphos-ethyl
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05			0.05	0.05			0.05			0.05							
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																				
NEPC 2013 Soil HIL C						250														
NEPC 2013 Soil HIL D						2000														
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																				
Sample ID	Depth (m)	Date																		
BH01	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.4-0.5	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	1-1.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0-0.2	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0-0.1	24/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
BH13	2-2.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0-0.1	24/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
BH20	0.9-1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0-0.1	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.6-0.7	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BP01	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BP02	0.3	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
BP04	0.1	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA01	0.2	26/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA03	0.1	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03	0.2	26/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA04	0.2	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05	0.3	26/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA06	0.1	26/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA07	0.1	26/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA09	0.4	26/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA17	0.2	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA18	0.2	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA21	0.1	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA21	0.6	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA23	0.2	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA24	0.2	27/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA25	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA27	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA28	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA31	0.2	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA34	0.2	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA36	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA37	0.2	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA39	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA40	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA42	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA43	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA46	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA48	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
HA49	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA51	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA54	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP01		25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SP02	0-0.4	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SP03		25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SP04		25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SP05	0.5-0.6	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-



			Organophosphorus Pesticides																	
			Azinphos methyl	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Dementon-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenitrothion	Fenthion	Malathion	Monocrotophos	Parathion	Parathion methyl	Pirimiphos-ethyl
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05			0.05	0.05			0.05				0.1						
NEPC 2013 ESL Commercial and Industrial, Coarse Soil																				
NEPC 2013 Soil HIL C						250														
NEPC 2013 Soil HIL D						2000														
NEPC 2013 Soil HSL D for Vapour Intrusion - Sand 0 to >1m																				
Sample ID	Depth (m)	Date	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-01	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-04	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-05	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-09	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-10	0.3	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-11	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-13	0.3	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
SS-14	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP02	0.2-0.4	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03	0.4-0.5	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP05	0.3-0.4	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP06	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP07	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP08	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	0-0.1	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP15	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP16	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP17	0.3-0.5	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP19	0.6-0.7	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP20	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP21	0-0.2	25/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
TP21	0.8-1	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP22	0-0.2	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP22	0.5-0.7	25/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	1.5-1.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	0.5-0.6	24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA04	0.1	27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA05	0.2	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
QA06	0.1	30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA07	0.1	30/09/2013	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-
QC01		24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02		24/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04		27/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC05		30/09/2013	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05
QC06		30/09/2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC07		30/09/2013	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05

Project Name: Eastern Creek Quarantine Station (Table 8 of 8)





Appendix A
Site Photograph Log

Site Photographs – 24 September 2013



Photograph 1 – Residence in the northeastern portion.



Photograph 2 –Glass greenhouses with attached temperature control units, and surface water drainage channel in foreground.



Photograph 3 –Electric sterilising unit with minor staining on the concrete base.



Photograph 4 –The Bee House building with water tank.



Photograph 5 – Kennels in the Dog/Cat section.



Photograph 6 – The effluent collection point in the eastern part of the Dog/Cat section.



Photograph 7 – View northwards of areas of building waste in the vicinity of former buildings



Photograph 8 – Disused incinerator with diesel storage drums in foreground



Photograph 9 – The decommissioned aboveground storage tank



Photograph 10 –The settling pond and embankment of fill



Photograph 11 – Excavation of TP01

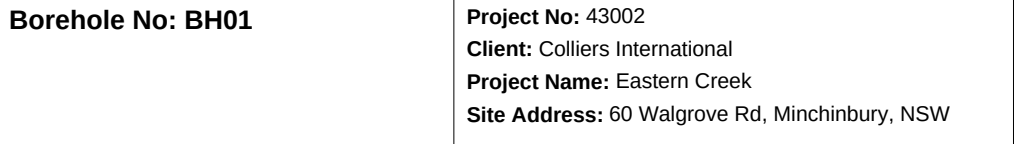


Photograph 12– Fill material soils from TP03.



Photograph 13– Natural red clay beneath fill in TP06.

Appendix B
Borehole logs



Eastings (MGA): -
Northings (MGA): -
Reference Level: AHD
Elevation - Surface (m): 0
Bore Diameter (mm): 50

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Ben Regan
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Tom Harding
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
© JBS&G



Borehole No: BH02

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level: AHD

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, very stiff, grey to brown	0.0 - 0.1	0.0	U	No ACM, staining or odours
		as above, reworked clay, orange with grey mottling	0.5 - 0.6	0.0	U	No ACM, staining or odours
1.0						
2.0		End of hole @ 1.5m - Natural material encountered				
3.0						

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

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Borehole No: BH03

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 2.1

Eastings (MGA): 301189.298

Northings (MGA): 6258759.576

Reference Level: AHD

Elevation - Surface (m): 0

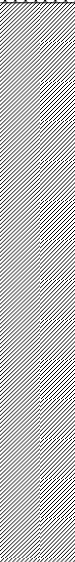
Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, grey/brown with some black mottles, dry, stiff, low plasticity, heterogeneous, inclusions of gravels	0.0 - 0.1		U	NO ACM, staining or odours
		CLAY grey with minor orange colouring, stiff, dry, homogenous, high plasticity	0.5 - 0.6		U	No ACM or odours Staining
		as above, less staining, orange clay				
1.0		as above, red to orange with grey mottles				
2.0		End of hole @ 2.1m				
3.0						

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

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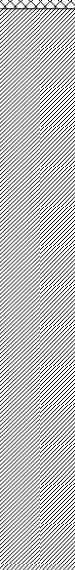
	Borehole No: BH04	Project No: 43002
		Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 24/09/2013 Eastings (MGA): 301160.385 Contractor: Rockwell Drilling Northings (MGA): 6258764.068 Drill Rig: Geoprobe Reference Level: AHD Method: PT Elevation - Surface (m): 0 Total Hole Depth (mbgs): 1.5 Bore Diameter (mm): 50		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL reworked natural clay, yellow to grey, stiff to very stiff, dry, low to moderate plasticity, heterogeneous	0.0-0.1	0.0	U	No ACM, odours or staining
		CLAY orange with grey mottling, high plasticity, dry to damp, homogeneous				
1.5		End of hole @ 1.5m				
2.0						
3.0						

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

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	Borehole No: BH05	Project No: 43002
		Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 24/09/2013 Contractor: Rockwell Drilling Drill Rig: Geoprobe Method: PT Total Hole Depth (mbgs): 1.5		
Eastings (MGA): - Northings (MGA): - Reference Level: Elevation - Surface (m): 0 Bore Diameter (mm): 50		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, stiff, grey to brown, minor clays, low plasticity, heterogeneous, inclusions of grass	0.0 - 0.2	0.0	U	No ACM, odours or staining
		CLAY orange with grey mottling, high plasticity, dry to damp, homogeneous				
1.5		End of hole @ 1.5m				
2.0						
3.0						

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

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Borehole No: BH06

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, grey to brown, minor clays, low to moderate plasticity, heterogeneous, inclusions of grass	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY orange with grey mottling, high plasticity, dry to damp, homogeneous				
			0.6 - 0.7	0.0	U	No ACM, odours or staining
1.0						
2.0		End of hole @ 1.5m				
3.0						

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

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Borehole No: BH07

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, grey to brown, low plasticity, dry, heterogeneous, inclusions of grass	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY orange with grey mottling, high plasticity, dry to damp, homogeneous				
1.5		End of hole @ 1.5 - Natural material encountered				
2.0						
3.0						

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

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Borehole No: BH08

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, yellow to brown, low plasticity, dry, homogeneous	0.0 - 0.1	0.0	U	No ACM, odours or staining
		as above, orange to brown with grey mottles, moderate to high plasticity, firm, minor black small gravels				
			0.4 - 0.5	0.0	U	No ACM, odours or staining
		CLAY orange with grey mottling, homogeneous, high plasticity, firm				
1.0						
		End of hole @ 1.5 m				
2.0						
3.0						

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

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Borehole No: BH09

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, yellow, dry, heterogeneous, grass and root inclusions	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY dry to damp, orange with grey mottles, high plasticity				
1.0			1.0 - 1.1	0.0	U	No ACM, odours or staining
		End of hole @ 1.5- Refusal on hard clay				
2.0						
3.0						

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

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**Borehole No: BH10****Project No: 43002****Client:** Colliers International**Project Name:** Eastern Creek Quarantine Station**Site Address:** 60 Walgrove Rd, Minchinbury, NSW**Date:** 24/09/2013**Contractor:** Rockwell Drilling**Drill Rig:** Geoprobe**Method:** PT**Total Hole Depth (mbgs):** 2.3**Eastings (MGA):** -**Northings (MGA):** -**Reference Level:****Elevation - Surface (m):** 0**Bore Diameter (mm):** 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, grey to brown with some grass, stiff, dry, heterogeneous, low plasticity	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY dry to damp, orange with grey mottles, high plasticity, firm				
1.0						
			1.5 - 1.6	0.0	U	No ACM, odours or staining QA01 & QC01 samples taken between 1.5 - 1.6
2.0		as above, grey, hard, high plasticity				
		End of hole @ 2.3 m - Refusal on hard clay				
3.0						

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

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Borehole No: BH11

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 2.4

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, grey to brown, low plasticity, stiff	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY dry, orange with grey mottles, high plasticity				
1.0						
			1.5 - 1.6	0.0	U	No ACM, odours or staining
		as above, less orange, more red in colour				
2.0						
		End of hole @ 2.4 m - Refusal				
3.0						

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

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Borehole No: BH12

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 2.1

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, grey to brown, low plasticity, stiff, grass throughout	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY red to yellow with grey mottling, dry to damp, high plasticity, homogeneous				
1.0						
2.0						
		End of hole @ 2.1m bgs				
3.0						

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

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Borehole No: BH13

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, dry, heterogeneous, grey to brown, low plasticity, stiff, grass throughout	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY orange/red with grey mottling,damp homogeneous, firm, moderate to high plasticity	0.5 - 0.6	0.0	U	No ACM. odours or staining
1.0		as above, red to brown with grey mottling				
2.0		End of hole @ 1.5m bgs				
3.0						

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

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**Borehole No: BH14****Project No: 43002****Client:** Colliers International**Project Name:** Eastern Creek Quarantine Station**Site Address:** 60 Walgrove Rd, Minchinbury, NSW**Date:** 24/09/2013**Contractor:** Rockwell Drilling**Drill Rig:** Geoprobe**Method:** PT**Total Hole Depth (mbgs):** 1.5**Eastings (MGA):** -**Northings (MGA):** -**Reference Level:****Elevation - Surface (m):** 0**Bore Diameter (mm):** 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, brown, orange to grey, low plasticity, stiff, grass and roots inclusions	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY orange and grey, dry to damp, moderate to high plasticity, homogeneous, firm	0.5 - 0.6	0.0	U	No ACM. odours or staining
1.0						
2.0						
3.0		End of hole @ 1.5m bgs				

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

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Borehole No: BH15

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.7

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, brown, orange to grey, low to moderate plasticity, firm to stiff, grass and root inclusions	0.0 - 0.1	0.0	U	No ACM, odours or staining
		as above, clay, red, moderate to high plasticity, grey mottling, dry to damp, firm to stiff				
			0.5 - 0.6	0.0	U	No ACM. odours or staining
		as above, sandy clay, light brown, dry, inclusions of crushed fine grained sandstone				
1.0			1.4 - 1.5	0.0	U	No ACM, odours or staining
2.0		End of hole @ 1.7m bgs - Refusal				
3.0						

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

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Borehole No: BH16

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, dry, heterogeneous, grey to brown, low plasticity, stiff, grass throughout	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY orange to brown, homogeneous, firm, moderate plasticity	0.5 - 0.6	0.0	U	No ACM. odours or staining
1.0		as above, red to brown with grey mottling				
2.0		End of hole @ 1.5m bgs				
3.0						

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

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Borehole No: BH17

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 2.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, dry, heterogeneous, grey to brown, low to moderate plasticity, stiff, inclusions of grass and roots	0.0 - 0.1	0.0	U	No ACM, odours or staining
		as above, red with grey mottling, with minor yellow sands coating tube, firm, high plasticity	0.4 - 0.5	0.0	U	No ACM. odours or staining QA02 & QC02
1.0						
		CLAY red with grey mottling, homogeneous, dry to damp, firm, high plasticity				
2.0						
		End of hole @ 2.5m bgs				
3.0						

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

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Borehole No: BH18

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

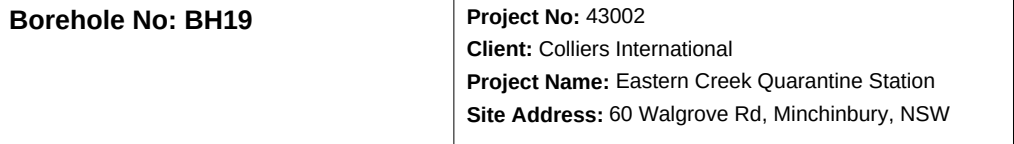
Elevation - Surface (m): 0

Bore Diameter (mm): 50

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, light brown, moderate plasticity, stiff, inclusions of grass roots and minor gravels	0.0 - 0.1	0.0	U	No ACM, odours or staining
		CLAY red to brown to grey, high plasticity, dry, stiff, homogeneous	0.5 - 0.6	0.0	U	No ACM, odours or staining
1.0						
2.0		End of hole @ 1.5m bgs				
3.0						

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

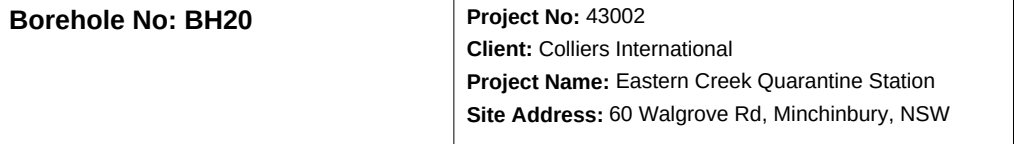
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Eastings (MGA): -
Northings (MGA): -
Reference Level:
Elevation - Surface (m): 0
Bore Diameter (mm): 50

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

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Eastings (MGA): -
Northings (MGA): -
Reference Level:
Elevation - Surface (m): 0
Bore Diameter (mm): 50

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

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Borehole No: BH21

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 24/09/2013

Contractor: Rockwell Drilling

Drill Rig: Geoprobe

Method: PT

Total Hole Depth (mbgs): 1.5

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 50

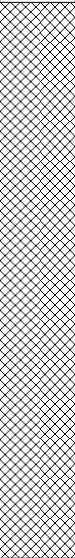
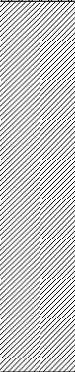
SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, dry, heterogeneous, brown, moderate plasticity, stiff, inclusions of grass roots ----- as above, red to brown to grey, moderate plasticity, dry to damp, stiff, heterogeneous, inclusions of roots, and possible minor bituminous gravels	0.0 - 0.1	0.0	U	No ACM, odours or staining
			0.6 - 0.7	0.0	U	No ACM, odours or staining
1.0						
			1.4 - 1.5	0.0	U	No ACM, odours of staining
		End of hole @ 1.5m bgs				
2.0						
3.0						

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

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Borehole No: BP01	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013	Eastings (MGA): 300781.415
Contractor:	Northings (MGA): 6258442.913
Drill Rig:	Reference Level: AHD
Method: HA	Elevation - Surface (m): 0
Total Hole Depth (mbgs): 0.5	Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE						
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments			
0.0		Ground Surface							
		FILL silty clay, medium plasticity, soft to firm, heterogeneous, dry to damp, light brown, inclusions of unknown gravels, roots	0.0 - 0.2				D	No odours, No ACM or staining observed	
			CLAY medium plasticity, firm, brown to orange, homogeneous, damp				0.3 - 0.4	D	No odours, No ACM or staining observed
		End of hole @ 0.5 mbgs - Refusal on hard clay							

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

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Borehole No: BP02

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Eastings (MGA): 300894.647

Contractor:

Northings (MGA): 6258417.974

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): 0

Total Hole Depth (mbgs): 0.5

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL sandy clay, non plastic, soft, heterogeneous, dry, grey to brown, inclusions of unknown gravels, styrofoam roots, concrete fragments, metal pieces	0.0 - 0.3		D	No odours, No ACM or staining observed
		as above, reworked natural clay, medium plasticity, firm, heterogeneous, dry to damp, inclusions of minor concrete granules, charcaol fragments	0.4 - 0.5		D	No odours, No ACM or staining observed
		End of hole @ 0.5 mbgs - Refusal on hard clay				

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

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Borehole No: BP03

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 300781.415

Contractor:

Northings (MGA): 6258442.913

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): 0

Total Hole Depth (mbgs): 0.4

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, dark brown, non plastic, soft, damp, heterogeneous, inclusions of tree roots, minor igneous gravels	0.0 - 0.3		D	No odours, No ACM or staining observed
		End of hole @ 0.4 mbgs - Natural material encountered				

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

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Borehole No: BP04

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Eastings (MGA): 300968.097

Contractor:

Northings (MGA): 6258406.85

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): 0

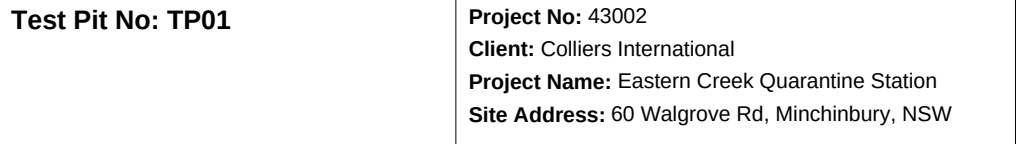
Total Hole Depth (mbgs): 0.5

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clayey silty sand, poorly graded, grey, very loose, dry, heterogeneous, inclusions of igneous gravels, grass roots	0.0 - 0.1		D	No odours, No ACM or staining observed
		as above, reworked natural, sandy clay, medium plasticity, firm, heterogeneous, dry				
			0.3 - 0.4		D	No odours, No ACM or staining observed
		End of hole @ 0.5 mbgs				

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

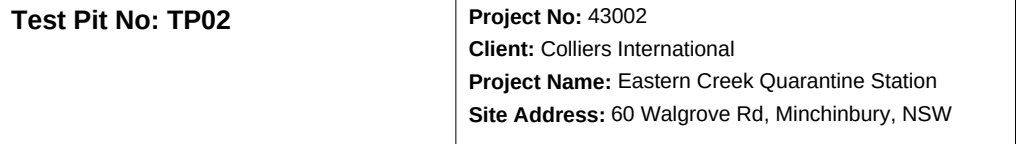
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Eastings (MGA): 301271.831
Northings (MGA): 6258766.868
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.21

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Eastings (MGA): 301254.101
Northings (MGA): 6258740.899
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Test Pit No: TP03

Project No: 43002
Client: Colliers International
Project Name: Eastern Creek Quarantine Station
Site Address: 60 Walgrove Rd, Minchinbury, NSW

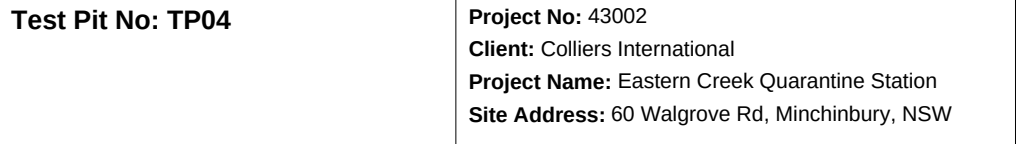
Date: 25/09/2013
Contractor: Ken Coles Excavations Pty Ltd
Excavation Plant: Bobcat
Method: TP
Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301189.298
Northings (MGA): 6258759.576
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, firm, grey to brown, medium plasticity, dry, heterogeneous inclusions of minor gravels, grass, tree roots,	0.0 - 0.2		D	No odours, No ACM or staining observed
		CLAY red to brown, firm, dry to damp, medium plasticity, homogeneous, inclusions of tree roots	0.4 - 0.5		D	No odours, No ACM or staining observed
		End of test pit @ 0.6mbgs				
1.0						

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

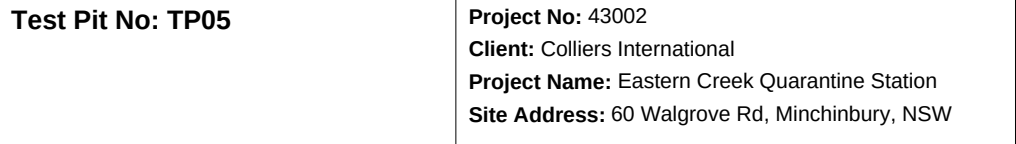
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Eastings (MGA): 301160.385
Northings (MGA): 6258764.068
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.15

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

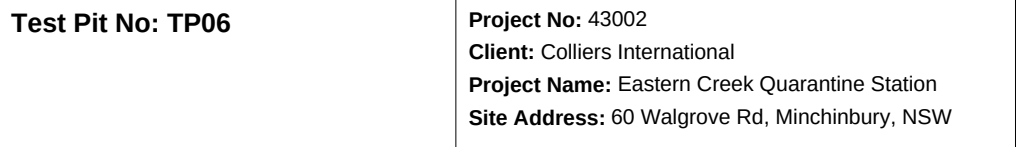
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Eastings (MGA): 301058.708
Northings (MGA): 6258488.917
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Eastings (MGA): 300972.651
Northings (MGA): 6258484.169
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Test Pit No: TP07

Project No: 43002
Client: Colliers International
Project Name: Eastern Creek Quarantine Station
Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 25/09/2013
Contractor: Ken Coles Excavations Pty Ltd
Excavation Plant: Bobcat
Method: TP
Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301012.07
Northings (MGA): 6258482.032
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, stiff to hard, brown, low plasticity, heterogeneous, inclusions of grass roots, igneous gravels	0.0 - 0.2		D	No odours, No ACM or staining observed
		CLAY orange with grey mottles, stiff, dry, high plasticity				
		End of test pit @ 0.6 mbgs				
1.0						

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Test Pit No: TP08

Project No: 43002
Client: Colliers International
Project Name: Eastern Creek Quarantine Station
Site Address: 60 Walgrove Rd, Minchinbury, NSW

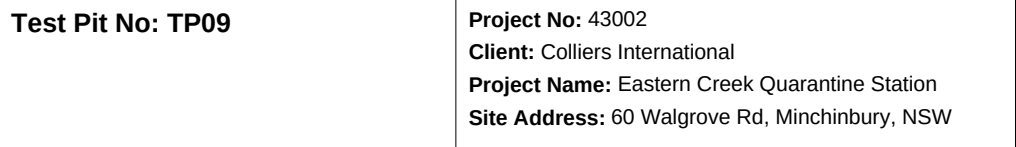
Date: 25/09/2013
Contractor: Ken Coles Excavations Pty Ltd
Excavation Plant: Bobcat
Method: TP
Total Hole Depth (mbgs): 0.5

Eastings (MGA): 301039.601
Northings (MGA): 6258515.992
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.15

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, firm, brown to red, medium plasticity, heterogeneous, dry, inclusions of grass roots, minor igneous gravels	0.0 - 0.2		D	No odours, No ACM or staining observed
		CLAY orange with grey mottling, stiff, dry, high plasticity, homogeneous				
		End of test pit @ 0.5 mbgs				
1.0						

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Eastings (MGA): 301044.812
Northings (MGA): 6258551.971
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.27

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Test Pit No: TP10

Project No: 43002
Client: Colliers International
Project Name: Eastern Creek Quarantine Station
Site Address: 60 Walgrove Rd, Minchinbury, NSW

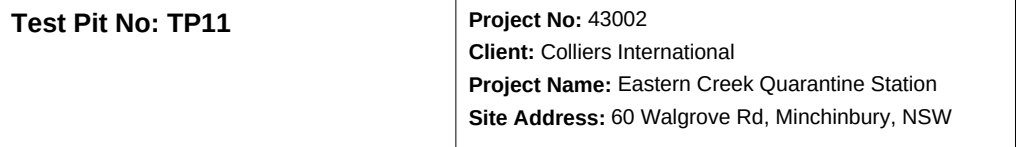
Date: 25/09/2013
Contractor: Ken Coles Excavations Pty Ltd
Excavation Plant: Bobcat
Method: TP
Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301064.334
Northings (MGA): 6258660.065
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, stiff, red to brown, high plasticity, heterogeneous, dry, inclusions of grass roots, igneous gravels and charcoal fragments	0.0 - 0.2		D	No odours, No ACM or staining
		CLAY red to orange with grey mottling, firm, high plasticity, homogeneous, dry to damp, with moisture increasing				
		End of test pit @ 0.6 mbgs				
1.0						

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Eastings (MGA): 301067.237
Northings (MGA): 6258677.306
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.12

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Test Pit No: TP12

Project No: 43002
Client: Colliers International
Project Name: Eastern Creek Quarantine Station
Site Address: 60 Walgrove Rd, Minchinbury, NSW

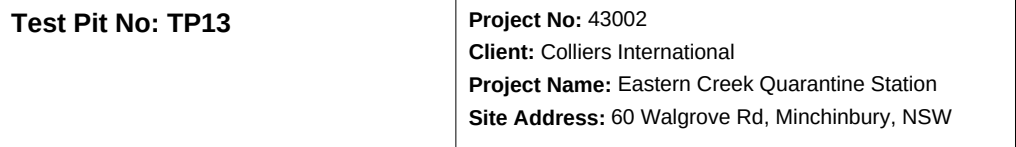
Date: 25/09/2013
Contractor: Ken Coles Excavations Pty Ltd
Excavation Plant: Bobcat
Method: TP
Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301048.321
Northings (MGA): 6258694.894
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, stiff, brown to dark brown, non plastic, heterogeneous, dry, inclusions of minor gravels and minor charcoal	0.0 - 0.2		D	No odours, No ACM or staining
		as above, reworked natural, orange, firm, high plasticity, heterogeneous, inclusions of minor gravels	0.3 - 0.4		D	No odours, No ACM or staining
		End of test pit @ 0.6 mbgs - Natural material encountered				
1.0						

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

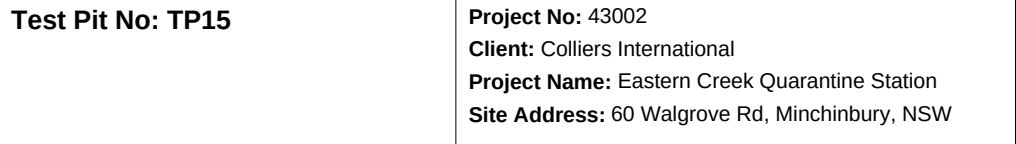
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Eastings (MGA): 301004.811
Northings (MGA): 6258699.386
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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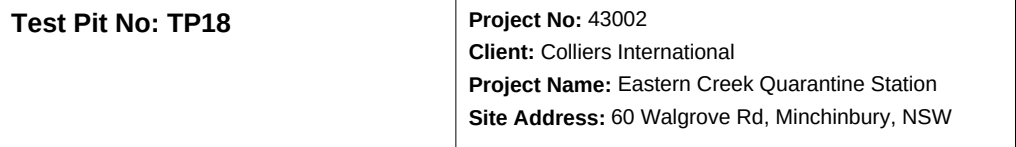
Eastings (MGA): 301193.824
Northings (MGA): 6258638.202
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.18

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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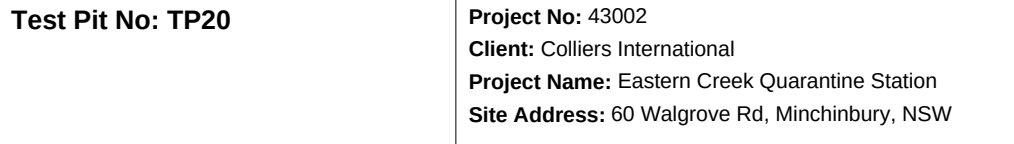


Eastings (MGA): 301181.195
Northings (MGA): 6258599.505
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.15

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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Eastings (MGA): 301229.926
Northings (MGA): 6258632.198
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.3

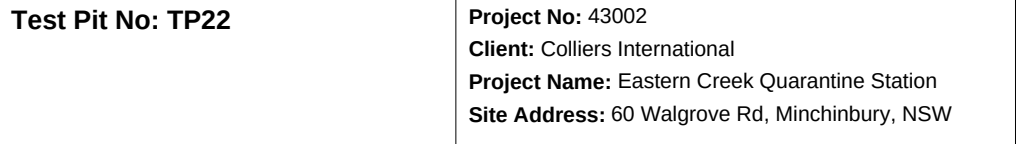
Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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	Test Pit No: TP21	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
	Date: 25/09/2013 Contractor: Ken Coles Excavations Pty Ltd Excavation Plant: Bobcat Method: TP Total Hole Depth (mbgs): 1.2	
Eastings (MGA): 301260.891 Northings (MGA): 6258614.624 Reference Level: AHD Elevation - Surface (m): 0 Pit Dimension (m³): 0.36		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, firm, dark brown, medium plasticity, heterogeneous, damp, inclusions of igneous gravels	0.0 - 0.2		D	No odours, No ACM or staining
		as above, red to orange, firm, medium plasticity, heterogenous, damp				
			0.8 - 1.0		D	No odours, No ACM or staining
1.0						
		CLAY red with grey mottling, firm, damp, homogeneous				
		End of test pit @ 1.2 mbgs				

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding



Eastings (MGA): 301247.789
Northings (MGA): 6258632.709
Reference Level: AHD
Elevation - Surface (m): 0
Pit Dimension (m³): 0.21

Method	Sample Type	Reference Level	Log Details
TP - Test Pit	D - Disturbed sample	AHD - Australian Height Datum BGS - Below Ground Surface	Logged By: Michael Greenwood Project Manager: Tom Harding

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	Borehole No: HA01	Project No: 43002
		Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 26/09/2013 Eastings (MGA): 301244.825 Contractor: Northings (MGA): 6258699.249 Drill Rig: Reference Level: Method: HA Elevation - Surface (m): 0 Total Hole Depth (mbgs): 0.6 Bore Diameter (mm):		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, soft, low plasticity, heterogeneous, dry to damp, inclusions of minor gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		reworked natural clay, medium plasticity, firm, red, damp, homogeneous	0.4 - 0.5		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m				

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

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Borehole No: HA02

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 301277.537

Contractor:

Northings (MGA): 6258693.015

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): 0

Total Hole Depth (mbgs): 0.6

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, soft to firm, low plasticity, dry, brown heterogeneous, inclusions of igneous gravels, grass roots	0.0 - 0.2		D	No odours, no ACM or staining observed
		as above, reworked clay, high plasticity, firm, red to grey, damp, homogeneous	0.4 - 0.5		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m				

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

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	Borehole No: HA03	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
	Date: 26/09/2013 Eastings (MGA): 301296.787 Contractor: Northings (MGA): 6258681.485 Drill Rig: Reference Level: Method: HA Elevation - Surface (m): 0 Total Hole Depth (mbgs): 0.5 Bore Diameter (mm):	

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clayey, sandy gravel, well graded, angular igneous gravels, wet, heterogeneous,	0.0 - 0.2		D	No odours, no ACM or staining observed
		sandy reworked clay, high plasticity, sort to firm, red to brown, heterogeneous, inclusions of minor gravels, high sand content	0.2 - 0.4		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal				

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

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	Borehole No: HA04	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 26/09/2013 Contractor: Drill Rig: Method: HA Total Hole Depth (mbgs): 0.5		
Eastings (MGA): 301271.757 Northings (MGA): 6258672.855 Reference Level: Elevation - Surface (m): 0 Bore Diameter (mm):		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, soft, dark brown, heterogeneous, damp, inclusions of tree roots, minor gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		suspected reworked clay, high plasticity, firm, red to orange, homogeneous, damp				
			0.3 - 0.4		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal				

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

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Borehole No: HA05

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 301290.377

Contractor:

Northings (MGA): 6258645.412

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): 0

Total Hole Depth (mbgs): 0.3

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, medium plasticity, soft, dark brown with red mottling, heterogeneous, wet, inclusions of roots, minor gravels	0.0 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Refusal on suspected concrete slab				

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

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Borehole No: HA06

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301261.136

Northings (MGA): 6258589.249

Reference Level:

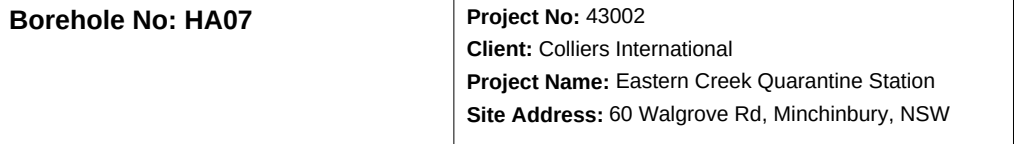
Elevation - Surface (m): -

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, non plastic, firm, light brown, heterogeneous, dry, inclusions of igneous gravels	0.0 - 0.1		D	No odours, no ACM or staining observed QA04 & QC04 samples taken for asbestos HA06 adjacent to bituminous slab
		Reworked clay, medium plasticity, firm, heterogeneous, dry, inclusions of minor gravels, ash and charcoal fragments				No odours, no ACM or staining observed
		End of Hole @ 0.6m - Refusal				

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

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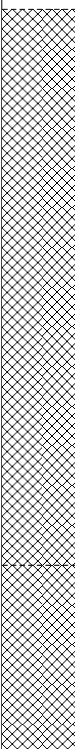
Eastings (MGA): 301244.825
Northings (MGA): 6258699.249
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm):

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

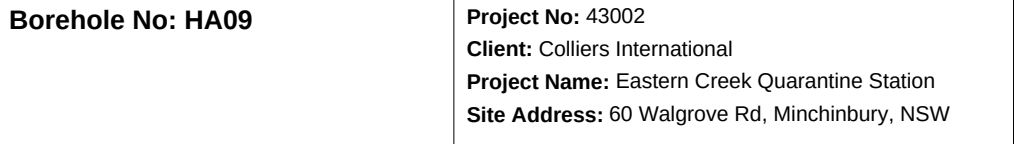
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Borehole No: HA08	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW

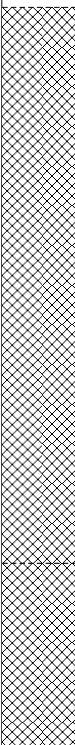
Date: 26/09/2013	Eastings (MGA): 301151.911
Contractor:	Northings (MGA): 6258614.098
Drill Rig:	Reference Level:
Method: HA	Elevation - Surface (m): -
Total Hole Depth (mbgs): 0.4	Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE					
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments		
0.0		Ground Surface						
		FILL clay, low plasticity, hard, red to orange, heterogeneous, dry, inclusions of minor gravels, grass roots	0.0 - 0.2				D	No odours, no ACM or staining observed
		Reworked clay, high plasticity, stiff, orange with grey mottling, homogeneous, dry to damp, inclusions of very minor gravels	0.3 - 0.4				D	No odours, no ACM or staining observed
	End of Hole @ 0.4m - Refusal on stiff clay							

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



Eastings (MGA): 301145.598
Northings (MGA): 6258644.883
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE					
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments		
0.0		Ground Surface						
		FILL silty clay, non plastic, firm, light brown, heterogeneous, dry, inclusions of gravels, concrete fragments	0.0 - 0.2				D	No odours, no ACM or staining observed
		Reworked clay, non plastic, hard, brown, heterogeneous, dry inclusions of minor gravels	0.3 - 0.4				D	No odours, no ACM or staining observed
	End of Hole @ 0.4m - Refusal on hard clay, tree roots							

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

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Borehole No: HA10

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 301237.234

Contractor:

Northings (MGA): 6258666.631

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.4

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, non plastic, firm, brown, heterogeneous, dry, inclusions of gravels, tree and grass roots, trace tile and charcoal	0.0 - 0.2		D	No odours, no ACM or staining observed
		End of Hole @ 0.4m - Refusal on concrete or large boulder				

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

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Borehole No: HA11

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 301147.536

Contractor:

Northings (MGA): 6258683.118

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.5

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty, sandy clay, non plastic, soft, brown, dry, heterogeneous, inclusions of quartz granules, angular gravels, grass roots	0.0 - 0.2		D	No odours, no ACM or staining observed
		Reworked natural, clay, high plasticity, firm, orange with grey mottling, heterogeneous, inclusions of minor gravels				
			0.4 - 0.5		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal on tree roots				

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

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Borehole No: HA12

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 26/09/2013

Eastings (MGA): 301211.472

Contractor:

Northings (MGA): 6258719.649

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

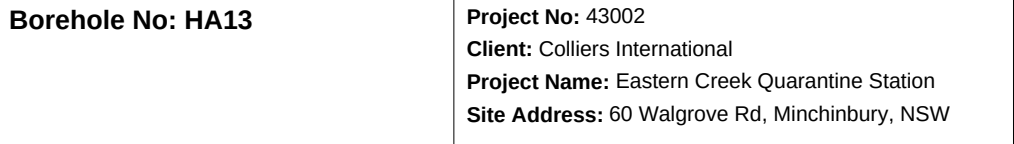
Total Hole Depth (mbgs): 0.6

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non plastic, firm, dry, light brown, heterogeneous, inclusions of charcoal granules, unknown gravels	0.0 - 0.3		D	No odours, no ACM or staining observed
		as above, with nodules of red clay with grey mottling, minor gravels	0.4 - 0.5		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m - Refusal on stiff clay				

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

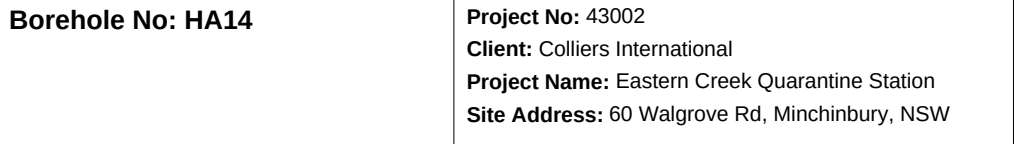
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Eastings (MGA): 301211.472
Northings (MGA): 6258719.649
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm):

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

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Eastings (MGA): 301140.333
Northings (MGA): 6258752.346
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm):

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

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Borehole No: HA15

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Eastings (MGA): 301121.848

Contractor:

Northings (MGA): 6258710.583

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.6

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non plastic, firm, dry, grey to brown heterogeneous, inclusions of concrete fragments, unidentified gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		reworked, clay, low plasticity, stiff, heterogeneous, brown, dry, inclusions of minor concrete				
			0.4 - 0.6		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m - Refusal on hard clay				

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

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Borehole No: HA16

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Eastings (MGA): 301103.051

Contractor:

Northings (MGA): 6258717.104

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.4

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, firm, dry, light brown heterogeneous, inclusions of minor gravels, organic material	0.0 - 0.1		D	No odours, no ACM or staining observed
		reworked natural clay, high plasticity, stiff, homogeneous, dry				
			0.3 - 0.4		D	No odours, no ACM or staining observed
		End of Hole @ 0.4m - Refusal on tree roots				

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

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Borehole No: HA17

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301059.4

Northings (MGA): 6258586.206

Reference Level: AHD

Elevation - Surface (m): -

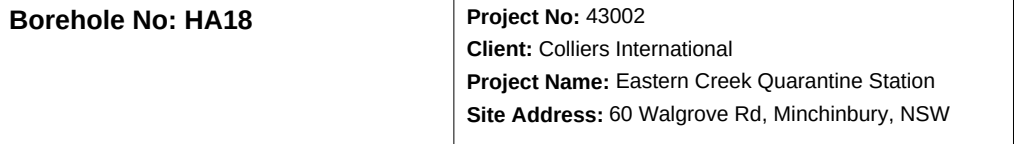
Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, medium plasticity, firm, grey to yellow, heterogeneous, dry, inclusions of pale yellow concrete fragments, organic matter	0.0 - 0.2		D	No odours, no ACM or staining observed
		reworked natural clay, high plasticity, firm, red with grey mottling, damp, homogeneous				
			0.4 - 0.6		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m - Refusal on hard clay				

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

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Borehole No: HA17a	Project No: 43002
	Client: Colliers International
	Project Name: Eastern Creek Quarantine Station
	Site Address: 60 Walgrove Rd, Minchinbury, NSW
Eastings (MGA): 301059.4 Northings (MGA): 6258586.206 Reference Level: AHD Elevation - Surface (m): - Bore Diameter (mm):	



Eastings (MGA): 301117.931
Northings (MGA): 6258675.664
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, low plasticity, firm, dry, grey to brown heterogeneous, inclusions of igneous gravels, organic material, concrete fragments	0.0 - 0.1			
		reworked natural silty clay, medium plasticity, firm, heterogeneous, orange, dry, inclusions of minor gravels	0.3 - 0.4		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal on hard clay				

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

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Borehole No: HA19

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.5

Eastings (MGA): 301123.547

Northings (MGA): 6258651.802

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly clay, non-plasticity, firm, dry, brown heterogeneous, inclusions of igneous gravels, organic material, concrete fragments	0.0 - 0.2		D	No odours, no ACM or staining observed
		reworked natural clay, high plasticity, firm, homogeneous, orange with grey mottling in some nodules				
			0.3 - 0.5		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal on hard clay				

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

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Borehole No: HA20

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.6

Eastings (MGA): 301087.32

Northings (MGA): 6258610.627

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non-plasticity, firm, dry, grey to brown, heterogeneous, inclusions of igneous gravels, organic material	0.0 - 0.1		D	No odours, no ACM or staining observed
		reworked natural clay, medium plasticity, stiff, heterogeneous, orange to brown, inclusions of suspected concrete granules				
			0.2 - 0.4		D	No odours, no ACM or staining observed
		as above nodules of orange clay with grey mottling, but no gravel inclusions				
			0.4 - 0.6		D	No odours, no ACM or staining observed
		End of Hole @ 0.6m - Refusal on hard clay				

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

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Borehole No: HA21

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.7

Eastings (MGA): 301092.132

Northings (MGA): 6258586.505

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non-plastic, firm, dry, brown heterogeneous, inclusions of igneous gravels, concrete fragments	0.0 - 0.1		D	No odours, no ACM or staining observed
		reworked natural clay, medium plasticity, firm, heterogeneous, brown, inclusions of minor gravels				
			0.2 - 0.3		D	No odours, no ACM or staining observed
		as above but no inclusions and homogeneous				
		clayey SAND loose, well graded, fine to coarse grained, brown, dry, inclusions of charcoal fragments, clay nodules	0.5 - 0.6		D	No odours, no ACM or staining observed
		End of Hole @ 0.7m - Target depth reached				

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

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Borehole No: HA22

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 27/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.5

Eastings (MGA): 300944.886

Northings (MGA): 6258599.921

Reference Level: AHD

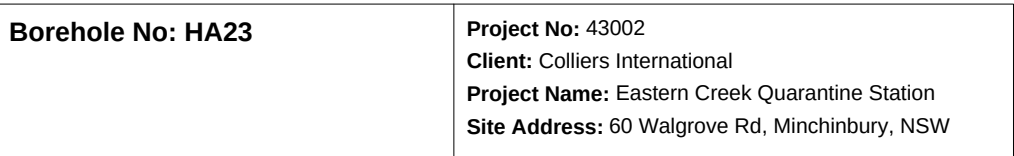
Elevation - Surface (m): -

Bore Diameter (mm):

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, firm, dry, heterogeneous, inclusions of igneous gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		reworked natural clay, medium plasticity, hard, homogeneous, orange to brown, dry				
			0.3 - 0.4		D	No odours, no ACM or staining observed
		End of Hole @ 0.5m - Refusal on hard clay				

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

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Eastings (MGA): -
Northings (MGA): -
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm):

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

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	Borehole No: HA24	Project No: 43002
		Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 27/09/2013		
Contractor:		
Drill Rig:		
Method: HA		
Total Hole Depth (mbgs): 0.4		
Eastings (MGA): - Northings (MGA): - Reference Level: Elevation - Surface (m): - Bore Diameter (mm):		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, black, wet, soft, homogeneous	0.0 - 0.2		D	Sample is adjacent to sewerage pumping pit No odours, no ACM or staining observed
		End of Hole @ 0.4m -Target depth reached				

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Michael Greenwood
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Tom Harding
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: HA25

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301009.43

Northings (MGA): 6258665.004

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL sandy clay, heterogeneous, non plastic, soft, brown, dry, inclusions of minor gravels, grass roots	0.0 - 0.2		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m -Target depth reached				

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

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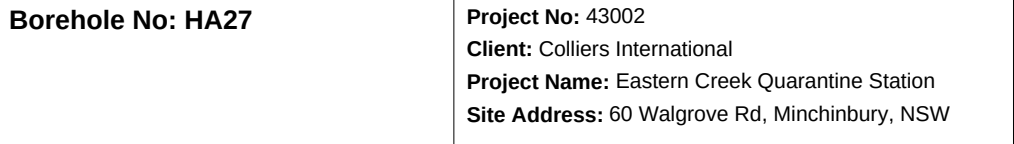
Borehole No: HA26	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013	Eastings (MGA): 300952.897
Contractor:	Northings (MGA): 6258673.504
Drill Rig:	Reference Level: AHD
Method: HA	Elevation - Surface (m): -
Total Hole Depth (mbgs): 0.3	Bore Diameter (mm): 150

[illegible]

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

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Eastings (MGA): 300989.649
Northings (MGA): 6258626.501
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

[illegible]

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

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Borehole No: HA28

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 301038.396

Contractor:

Northings (MGA): 6258617.443

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.2

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, heterogeneous, medium plasticity, stiff, light brown, dry, inclusions of trace gravels and grass roots	0.0 - 0.2		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA29

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 301040.627

Contractor:

Northings (MGA): 6258589.448

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, heterogeneous, low plasticity, firm, light brown, dry, inclusions of minor gravels and grass roots	0.0 - 0.1		D	No odours, no ACM or staining observed
		clay, high plasticity, firm, damp, orange with grey mottling, heterogeneous, inclusions of minor gravels				
		End of Hole @ 0.3m - Target depth reached				

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

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Borehole No: HA30

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): -

Northings (MGA): -

Reference Level:

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly sand, loose, fine grained to cobbles, well graded, light brown, inclusions of igneous gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA31

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300952.796

Contractor:

Northings (MGA): 6258581.105

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty sand, very loose, fine to coarse grained, well sorted, light brown, dry, heterogeneous, inclusions of gravels	0.0 - 0.1		D	QA05 & QC05 samples taken No odours, no ACM or staining observed
		as above but dark brown, less fine and more coarse sand and with more igneous gravels				
		End of Hole @ 0.3m - Target depth reached				

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

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Borehole No: HA32

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300930.174

Contractor:

Northings (MGA): 6258549.736

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

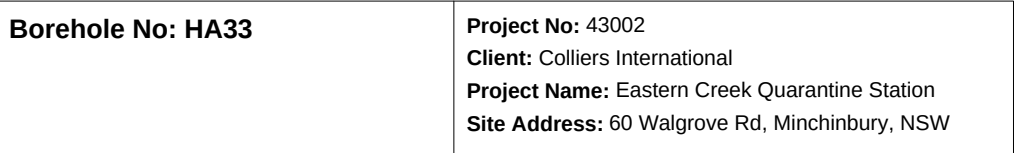
Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

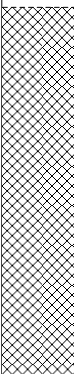
SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non plastic, soft, brown, dry, heterogeneous, inclusions of unidentified gravels, organic matter, igneous gravels	0.0 - 02		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

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

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Eastings (MGA): 300918.87
Northings (MGA): 6258499.961
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL clay, medium plasticity, light brown, dry, heterogeneous, inclusions of unidentified gravels	0.0 - 02			
		End of Hole @ 0.2m - Target depth reached				

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

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Borehole No: HA34

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300919.676

Contractor:

Northings (MGA): 6258519.818

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, heterogeneous, low plasticity, firm, orange to brown, dry, inclusions of minor igneous gravels, organic matter, unidentified gravels	0.0 - 0.2		D	No odours, no ACM or staining observed
		silty sand, very loose, dry, medium to coarse grained, well graded, heterogeneous, inclusions of igneous and sandstone gravels, clay nodules				
		End of Hole @ 0.3m - Target depth reached				

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

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Borehole No: HA35

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301021.424

Northings (MGA): 6258507.935

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, heterogeneous, high plasticity, stiff, orange to brown, dry, inclusions of igneous gravels and organic matter	0.0 - 0.1		D	No odours, no ACM or staining observed
		as above but firm, damp and orange				
		End of Hole @ 0.3m - Target depth reached				

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

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Borehole No: HA36

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300983.301

Contractor:

Northings (MGA): 6258513.645

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.2

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low to non plasticity, light brown to grey, dry, hard, heterogeneous, inclusions of igneous gravels, minor organic material	0.0 - 02		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA37

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): 301012.366

Northings (MGA): 6258533.369

Reference Level: AHD

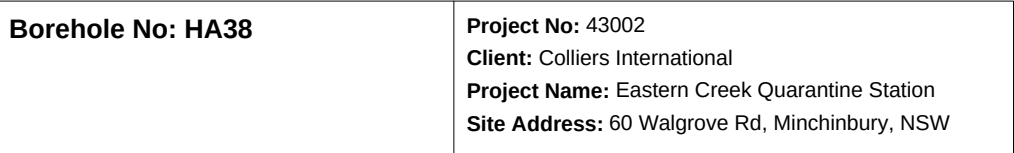
Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL gravelly silty clay, non plasticity, dark brown, dry, stiff, heterogeneous, inclusions of igneous gravels, organic material, mudstone granules	0.0 - 02		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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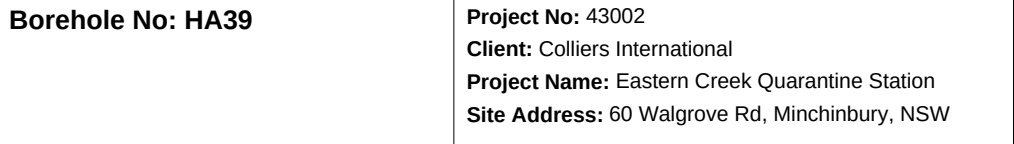


Eastings (MGA): 300976.237
Northings (MGA): 6258538.818
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

[illegible]

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

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Bore Diameter (mm): 150

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

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Borehole No: HA40

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.1

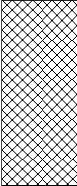
Eastings (MGA): -

Northings (MGA): -

Reference Level:

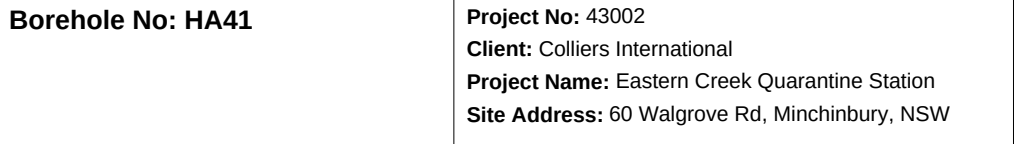
Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL reworked clay, non-plastic, brown, dry, hard, heterogeneous, inclusions of igneous gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.1m - Refusal on hard clay				

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

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Eastings (MGA): 301209.499
Northings (MGA): 6258407.908
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

[illegible]

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

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Borehole No: HA42

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.15

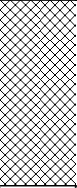
Eastings (MGA): 301148.814

Northings (MGA): 6258385.198

Reference Level:

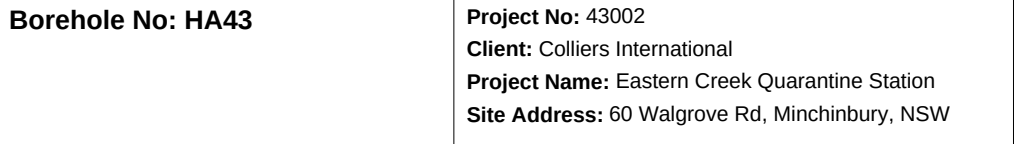
Elevation - Surface (m): -

Bore Diameter (mm): 150

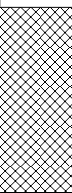
SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, brown, dry, stiff, heterogeneous, inclusions of igneous gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.15m - Natural material encountered				

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

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Eastings (MGA): 301099.278
Northings (MGA): 6258388.112
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, non plastic, brown, dry, stiff, homogeneous	0.0 - 01			
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA44

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): 301054.582

Northings (MGA): 6258407.894

Reference Level:

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, brown, dry, stiff, heterogeneous, inclusions of unidentified gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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



Borehole No: HA45

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): 300994.806

Northings (MGA): 6258420.76

Reference Level:

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, brown, dry, firm, heterogeneous, inclusions of igneous gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA46

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300828.007

Contractor:

Northings (MGA): 6258448.858

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.2

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, low plasticity, orange to brown, dry to damp, stiff, heterogeneous, inclusions of minor gravels, organic material	0.0 - 01		D	QA07 & QC07 samples taken No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA47

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): 300837.125

Northings (MGA): 6258588.959

Reference Level:

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non plastic, brown, dry to damp, firm, heterogeneous, inclusions of igneous gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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



Borehole No: HA48

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300865.43

Contractor:

Northings (MGA): 6258663.816

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

Total Hole Depth (mbgs): 0.2

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, non plastic, light brown, dry to damp, firm to stiff, heterogeneous, inclusions of minor igneous gravels, organic material	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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Borehole No: HA49

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 300927.417

Contractor:

Northings (MGA): 6258709.089

Drill Rig:

Reference Level:

Method: HA

Elevation - Surface (m): -

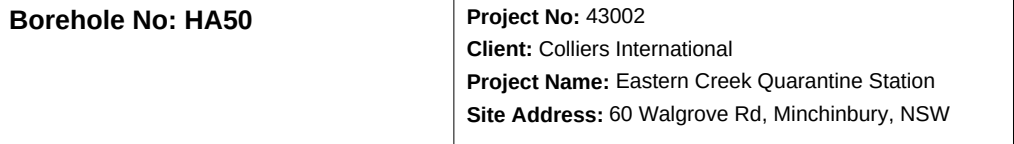
Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

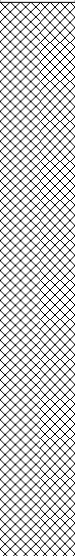
SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, medium plasticity, light brown, damp, soft to firm, heterogeneous, inclusions of minor gravels	0.0 - 01		D	No odours, no ACM or staining observed
		silty CLAY damp to moist, medium plasticity, firm, heterogeneous, inclusions of organic material and roots				
		End of Hole @ 0.3m - Refusal on hard clay				

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

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Eastings (MGA): -
Northings (MGA): -
Reference Level:
Elevation - Surface (m): -
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL sandy clay, low plasticity, soft, damp, orange to brown, heterogeneous, inclusions of charcoal, tree roots, organic material	0.0 - 01			
		End of Hole @ 0.2m -Natural material encountered				

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

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Borehole No: HA51

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 300892.081

Northings (MGA): 6258812.458

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		silty SAND brown, heterogeneous, damp, dense, fine to medium grained	0.0 - 01		D	No odours, no ACM or staining observed
		as above but grey to brown				
		End of Hole @ 0.3m -Target depth reached				

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

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	Borehole No: HA52	Project No: 43002
		Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW
Date: 30/09/2013 Eastings (MGA): 300846.601 Contractor: Northings (MGA): 6258764.493 Drill Rig: Reference Level: AHD Method: HA Elevation - Surface (m): - Total Hole Depth (mbgs): 0.3 Bore Diameter (mm): 150		

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		silty SAND brown, heterogeneous, damp, medium dense, poorly sorted	0.0 - 01		D	No odours, no ACM or staining observed
		as above but grey to brown				
		End of Hole @ 0.3m -Target depth reached				

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Michael Greenwood
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Tom Harding
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: HA53

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301021.317

Northings (MGA): 6258777.592

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, low plasticity, firm, heterogeneous, dry, dark brown, inclusions of charcoal and ash	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m -Target depth reached, encountered natural material				

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

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



Borehole No: HA54

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.2

Eastings (MGA): -

Northings (MGA): -

Reference Level:

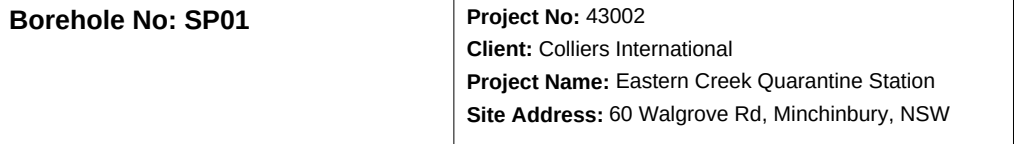
Elevation - Surface (m): -

Bore Diameter (mm): 150

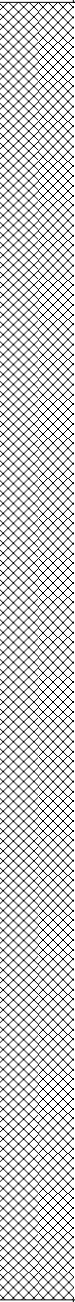
SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty sandy clay, non plastic, firm, heterogeneous, dry, dark brown, inclusions of igneous gravels	0.0 - 01		D	No odours, no ACM or staining observed
		End of Hole @ 0.2m - Refusal on hard clay				

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

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

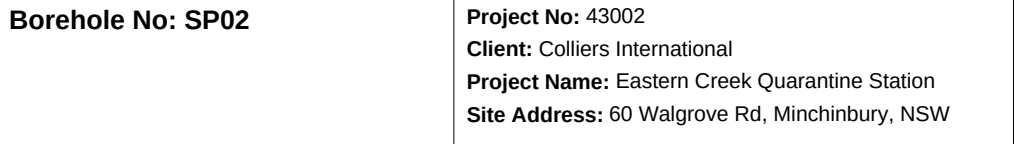


Eastings (MGA): 300999.271
Northings (MGA): 6258700.262
Reference Level: AHD
Elevation - Surface (m): 0
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, No ACM or staining observed
		FILL sandy, silty clay, non plastic, heterogeneous, brown, inclusions of plant roots/weeds, and other organic material	SP01			

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

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Eastings (MGA): 301005.448
Northings (MGA): 6258692.453
Reference Level: AHD
Elevation - Surface (m): 0
Bore Diameter (mm): 150

Northings (MGA): 6258692.453

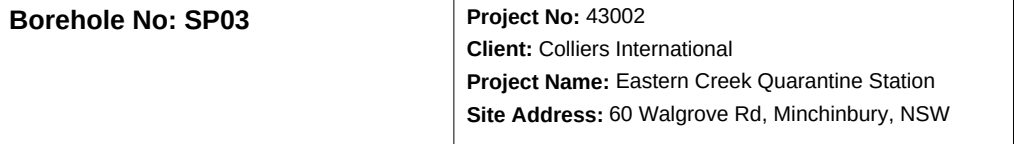
Reference Level: AHD

Elevation - Surface (m): 0

Bore Diameter (mm): 150

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

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SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty sand, heterogeneous, inclusions of tree roots, plastic tape, concrete pillar, steel sign post, concrete boulders, minor charcoal fragments, igneous gravels	SP03		D	No odours, No ACM or staining observed QA03 & QC03 sampled

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

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Borehole No: SP04

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 25/09/2013

Eastings (MGA): 300807

Contractor:

Northings (MGA): 6258486.52

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): 0

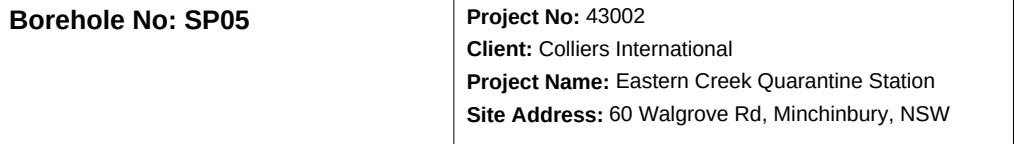
Total Hole Depth (mbgs):

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, hard, dry, high plasticity, heterogeneous, inclusions of concrete boulders, plastic, igneous gravels, organic material, steel wire, redundant conduit fragments	SP04		D	Stockpile is acting as a bund wall for the settling pond in the western portion of the back paddock No odours, no ACM or staining observed

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

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Eastings (MGA): -
Northings (MGA): -
Reference Level:
Elevation - Surface (m): 0
Bore Diameter (mm): 150

Northings (MGA): -

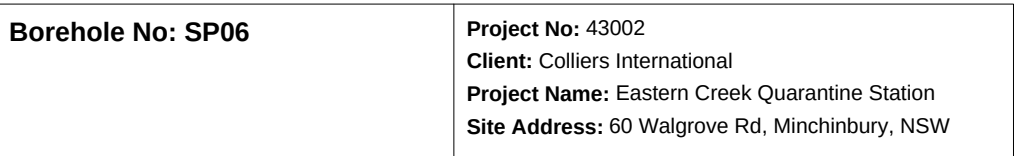
Reference Level:

Elevation - Surface (m): 0

Bore Diameter (mm): 150

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

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SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL clay, low plasticity, hard, red with grey mottling, heterogeneous, inclusions of gravels and grass roots	SP06		D	No odours, No ACM or staining observed

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

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Borehole No: SP07

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 25/09/2013

Eastings (MGA): 300816.871

Contractor:

Northings (MGA): 6258554.796

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): 0

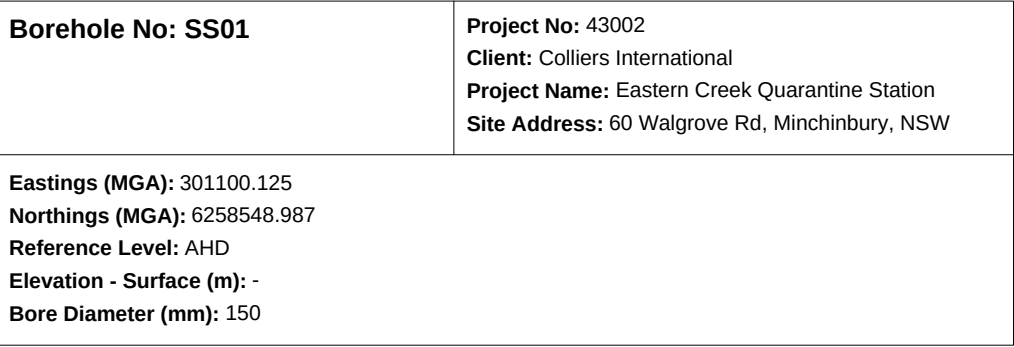
Total Hole Depth (mbgs):

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, firm, very stiff, dry, heterogeneous, inclusions of house bricks, concrete fragments, igneous gravels, ceramic tiles, PVC fragments	SP07		D	No odours, No ACM or staining observed

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

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SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface	0.0 - 0.1		D	No odours, no ACM or staining observed
		FILL silty clay, brown, heteroeogeneous, dry to damp, firm, low plasticity, inclusions of plastic, rootlets, igneous gravels				
		End of Hole @ 0.1m - Target depth reached				

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

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Borehole No: SS01

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.1

Eastings (MGA): 301084.471

Northings (MGA): 6258490.154

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, orange to brown, heteroogeneous, dry to damp, stiff, medium plasticity, inclusions of plastic, rootlets, igneous gravels	0.0 - 0.1		D	No odours, no ACM or staining observed
		End of Hole @ 0.1m - Target depth reached				

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

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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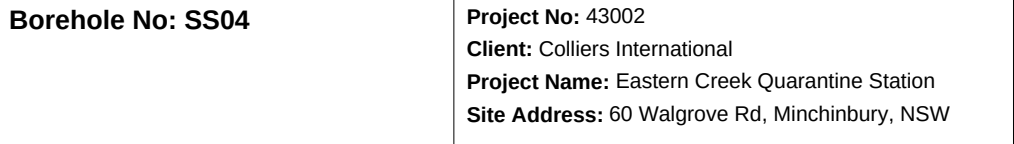
Borehole No: SS03	Project No: 43002 Client: Colliers International Project Name: Eastern Creek Quarantine Station Site Address: 60 Walgrove Rd, Minchinbury, NSW

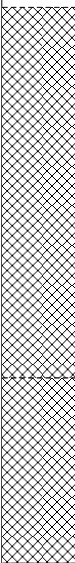
Date: 30/09/2013	Eastings (MGA): 301078.785
Contractor:	Northings (MGA): 6258470.605
Drill Rig:	Reference Level: AHD
Method: HA	Elevation - Surface (m): -
Total Hole Depth (mbgs): 0.3	Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, orange to brown, hedteroogeneous, dry to damp, stiff, medium plasticity, inclusions of plastic, rootlets, igneous gravels	0.0 - 0.1			
		as above, inclusions clay nodules and concrete fragments	0.2 - 0.3			
		End of Hole @ 0.3m - Target depth reached				

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

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SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, orange to brown, heteroogeneous, dry to damp, stiff, medium plasticity, inclusions of plastic, steel pieces, igneous gravels	0.0 - 0.1			
		reworked natural, sandy clay, brown, heterogeneous, dry, dense,	0.2 - 0.3			
	End of Hole @ 0.3m - Target depth reached					

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

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Borehole No: SS06

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.1

Eastings (MGA): 301132.497

Northings (MGA): 6258500.924

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, brown, heteroogeneous, dry, stiff, low plasticity, inclusions of shale and glass fragments, igneous gravels	0.0 - 0.1		D	No odours, no ACM or staining observed
		End of Hole @ 0.1m - Target depth reached				

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

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: SS07

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301117.597

Northings (MGA): 6258532.739

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, brown, heteroeogeneous, dry, stiff, low plasticity, inclusions of shale and glass fragments igneous gravels	0.0 - 0.1			
		as above, less inclusions	0.2 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

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

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: SS09

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301168.663

Northings (MGA): 6258567.017

Reference Level: AHD

Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, dark brown, heteroeogeneous, damp to moist, soft, low plasticity, inclusions of minor gravels	0.0 - 0.1		D	No odours, no ACM or staining observed
		clay, high plasticity, soft to firm, damp to moist, grey with red streaking, heterogeneous, inclusions of red sandstone fragments, silty sand, coarse sand	0.2 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

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

NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Borehole No: SS10

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Contractor:

Drill Rig:

Method: HA

Total Hole Depth (mbgs): 0.3

Eastings (MGA): 301164.501

Northings (MGA): 6258514.111

Reference Level: AHD

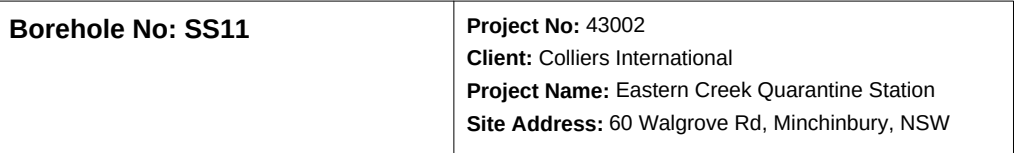
Elevation - Surface (m): -

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL silty clay, brown, heteroeogeneous, dry, very stiff, low plasticity, inclusions of igneous gravels, brick fragments	0.0 - 0.1		D	No odours, no ACM or staining observed
		as above but no inclusions	0.2 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

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

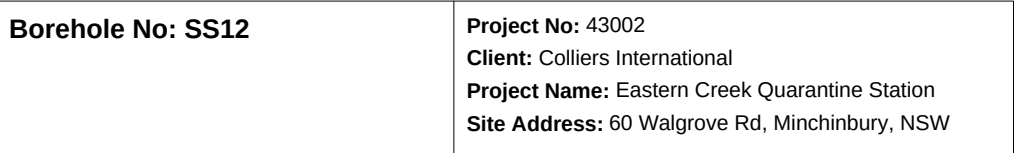
NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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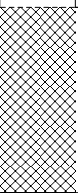
Eastings (MGA): 301162.618
Northings (MGA): 6258495.119
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

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

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Eastings (MGA): 301157.445
Northings (MGA): 6258458.855
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, dark brown, heteroogeneous, dry, stiff, low plasticity, inclusions of shale and igneous gravels	0.0 - 0.1			
		End of Hole @ 0.1m - Target depth reached				

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

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Borehole No: SS13

Project No: 43002

Client: Colliers International

Project Name: Eastern Creek Quarantine Station

Site Address: 60 Walgrove Rd, Minchinbury, NSW

Date: 30/09/2013

Eastings (MGA): 301194.593

Contractor:

Northings (MGA): 6258452.288

Drill Rig:

Reference Level: AHD

Method: HA

Elevation - Surface (m): -

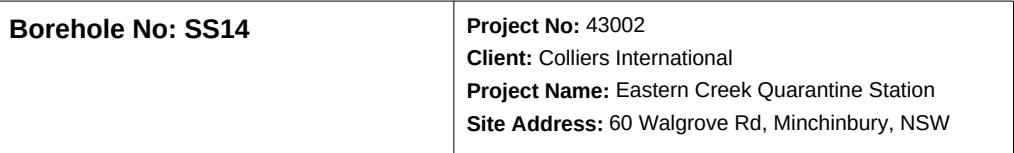
Total Hole Depth (mbgs): 0.3

Bore Diameter (mm): 150

SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface				
		FILL (Topsoil) silty clay, dark brown, heteroeogeneous, dry, stiff, low plasticity, inclusions of shale and igneous gravels	0.0 - 0.1		D	No odours, no ACM or staining observed
		as above with inclusions of clay nodules	0.2 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

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

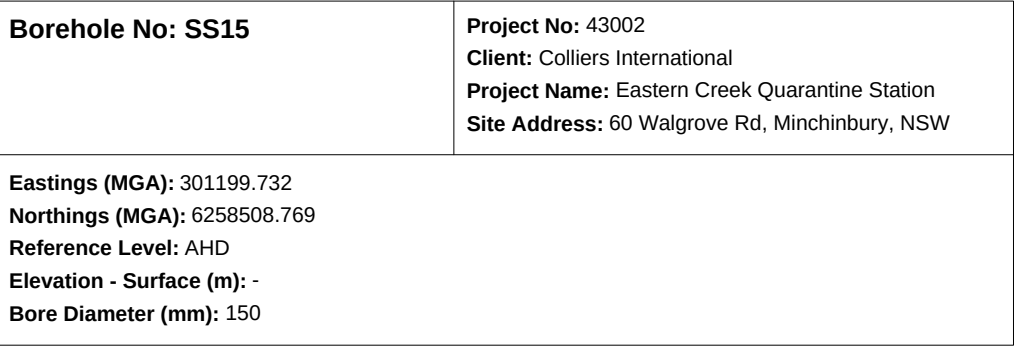
NOTE: This bore log is for environmental assessment purposes only and is not intended to provide geotechnical information
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Eastings (MGA): 301196.971
Northings (MGA): 6258484.824
Reference Level: AHD
Elevation - Surface (m): -
Bore Diameter (mm): 150

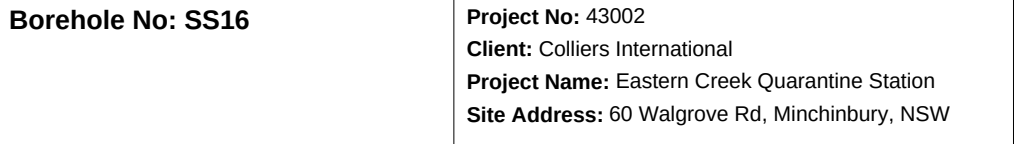
Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: George Black
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Tom Harding
HFA - Hollow Flight Auger	CS - Core sample		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

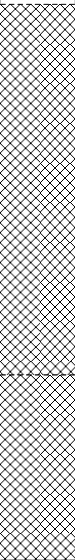
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[illegible]

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

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SUBSURFACE PROFILE			SAMPLE			
Depth	Graphic Log	Lithologic Description	Sample ID	PID (ppm)	Sample Type	Comments
0.0		Ground Surface			D	No odours, no ACM or staining observed
		FILL silty clay, dark brown, heteroogeneous, damp to moist, soft, low plasticity, inclusions of plastic washer, minor igneous gravels	0.0 - 0.1			
		clay, high plasticity, soft, damp to moist, red with grey mottling, heterogeneous, inclusions of mudstone fragments	0.2 - 0.3		D	No odours, no ACM or staining observed
		End of Hole @ 0.3m - Target depth reached				

Drilling Method	Sample Type	Reference Level	Log Details
HA - Hand Auger	U - Undisturbed tube sample	AHD - Australian Height Datum	Logged By: Michael Greenwood
SFA - Solid Flight Auger	D - Disturbed sample	BGS - Below Ground Surface	Project Manager: Tom Harding
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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Appendix C
Laboratory Reports and Chain of Custody Documentation

CERTIFICATE OF ANALYSIS

98070

Client:

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

Attention: Tom Harding

Sample log in details:

Your Reference:	43002, Eastern Creek
No. of samples:	43 Soils, 1 Material
Date samples received / completed instructions received	26/09/2013 / 26/09/2013

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:	8/10/13 / 9/10/13
Date of Preliminary Report:	Not issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:



Jacinta Hurst
Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-1	98070-4	98070-6	98070-7	98070-10
Our Reference:	-----	TP01	TP02	TP03	TP04	TP05
Your Reference	-----	0.0-0.2	0.2-0.4	0.4-0.5	0.0-0.2	0.3-0.4
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	90	83	90	90

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-11	98070-13	98070-14	98070-15	98070-17
Our Reference:	-----	TP06	TP07	TP08	TP09	TP10
Your Reference	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	89	89	89	90

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-18	98070-19	98070-21	98070-22	98070-23
Our Reference:	-----	TP11	TP12	TP13	TP14	TP15
Your Reference	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.1	0.0-0.2
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	90	93	86	91

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-24	98070-27	98070-28	98070-31	98070-33
Our Reference:	-----	TP16	TP17	TP18	TP20	TP21
Your Reference	-----	0.0-0.2	0.3-0.5	0.0-0.2	0.0-0.2	0.0-0.2
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	91	85	89	96

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-34	98070-35	98070-36	98070-37	98070-38
Our Reference:	-----	TP21	TP22	TP22	SP01	SP02
Your Reference	-----	0.8-1.0	0.0-0.2	0.5-0.7	-	0.0-0.4
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	85	84	87	83

vTRH(C6-C10)/BTEXN in Soil	UNITS	98070-39	98070-40	98070-43
Our Reference:	-----	SP03	SP04	SP05
Your Reference	-----	-	-	0.5-0.6
Depth		25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil
Type of sample				
Date extracted	-	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	85	91

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-1 TP01 0.0-0.2 25/09/2013 Soil	98070-4 TP02 0.2-0.4 25/09/2013 Soil	98070-6 TP03 0.4-0.5 25/09/2013 Soil	98070-7 TP04 0.0-0.2 25/09/2013 Soil	98070-10 TP05 0.3-0.4 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	109	110	106	104	98

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-11 TP06 0.0-0.2 25/09/2013 Soil	98070-13 TP07 0.0-0.2 25/09/2013 Soil	98070-14 TP08 0.0-0.2 25/09/2013 Soil	98070-15 TP09 0.0-0.2 25/09/2013 Soil	98070-17 TP10 0.0-0.2 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	117	102	120	106	109

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-18 TP11 0.0-0.2 25/09/2013 Soil	98070-19 TP12 0.0-0.2 25/09/2013 Soil	98070-21 TP13 0.0-0.2 25/09/2013 Soil	98070-22 TP14 0.0-0.1 25/09/2013 Soil	98070-23 TP15 0.0-0.2 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	250	<100	<100	<100	100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	140	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	220	<100	<100	<100	120
Surrogate o-Terphenyl	%	96	101	106	104	68

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-24 TP16 0.0-0.2 25/09/2013 Soil	98070-27 TP17 0.3-0.5 25/09/2013 Soil	98070-28 TP18 0.0-0.2 25/09/2013 Soil	98070-31 TP20 0.0-0.2 25/09/2013 Soil	98070-33 TP21 0.0-0.2 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	105	103	100	106	107

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-34 TP21 0.8-1.0 25/09/2013 Soil	98070-35 TP22 0.0-0.2 25/09/2013 Soil	98070-36 TP22 0.5-0.7 25/09/2013 Soil	98070-37 SP01 - 25/09/2013 Soil	98070-38 SP02 0.0-0.4 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	98	95	97	90	95

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-39 SP03 - 25/09/2013 Soil	98070-40 SP04 - 25/09/2013 Soil	98070-43 SP05 0.5-0.6 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013
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 ₁₀ - C ₁₆ less Naphthalene (F2)	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	%	100	94	96

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-1 TP01 0.0-0.2 25/09/2013 Soil	98070-4 TP02 0.2-0.4 25/09/2013 Soil	98070-6 TP03 0.4-0.5 25/09/2013 Soil	98070-7 TP04 0.0-0.2 25/09/2013 Soil	98070-10 TP05 0.3-0.4 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	99	105	101	102	99

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-11 TP06 0.0-0.2 25/09/2013 Soil	98070-13 TP07 0.0-0.2 25/09/2013 Soil	98070-14 TP08 0.0-0.2 25/09/2013 Soil	98070-15 TP09 0.0-0.2 25/09/2013 Soil	98070-17 TP10 0.0-0.2 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	107	99	121	108	103

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-19 TP12 0.0-0.2 25/09/2013 Soil	98070-21 TP13 0.0-0.2 25/09/2013 Soil	98070-22 TP14 0.0-0.1 25/09/2013 Soil	98070-23 TP15 0.0-0.2 25/09/2013 Soil	98070-24 TP16 0.0-0.2 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	97	103	105	74	105

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-27 TP17 0.3-0.5 25/09/2013 Soil	98070-28 TP18 0.0-0.2 25/09/2013 Soil	98070-31 TP20 0.0-0.2 25/09/2013 Soil	98070-33 TP21 0.0-0.2 25/09/2013 Soil	98070-34 TP21 0.8-1.0 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	109	105	106	106	105

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-35 TP22 0.0-0.2 25/09/2013 Soil	98070-36 TP22 0.5-0.7 25/09/2013 Soil	98070-37 SP01 - 25/09/2013 Soil	98070-38 SP02 0.0-0.4 25/09/2013 Soil	98070-39 SP03 - 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	100	103	105	103	107

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-40 SP04 - 25/09/2013 Soil	98070-43 SP05 0.5-0.6 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	103	100

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98070-1	98070-7	98070-10	98070-11	98070-13
Your Reference	-----	TP01	TP04	TP05	TP06	TP07
Depth	-----	0.0-0.2	0.0-0.2	0.3-0.4	0.0-0.2	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	129	129	118	130	121

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98070-22	98070-23	98070-28	98070-30	98070-31
Your Reference	-----	TP14	TP15	TP18	TP19	TP20
Depth	-----	0.0-0.1	0.0-0.2	0.0-0.2	0.6-0.7	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	129	91	122	124	131

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98070-33	98070-37	98070-38	98070-39	98070-40
Your Reference	-----	TP21	SP01	SP02	SP03	SP04
Depth	-----	0.0-0.2	-	0.0-0.4	-	-
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	128	120	123	126	119

Organochlorine Pesticides in soil		
Our Reference:	UNITS	98070-43
Your Reference	-----	SP05
Depth	-----	0.5-0.6
Date Sampled		25/09/2013
Type of sample		Soil
Date extracted	-	27/09/2013
Date analysed	-	27/09/2013
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	133

Organophosphorus Pesticides	UNITS	98070-1	98070-7	98070-10	98070-11	98070-13
Our Reference:	-----	TP01	TP04	TP05	TP06	TP07
Your Reference	-----	0.0-0.2	0.0-0.2	0.3-0.4	0.0-0.2	0.0-0.2
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	129	129	118	130	121

Organophosphorus Pesticides	UNITS	98070-22	98070-23	98070-28	98070-30	98070-31
Our Reference:	-----	TP14	TP15	TP18	TP19	TP20
Your Reference	-----	0.0-0.1	0.0-0.2	0.0-0.2	0.6-0.7	0.0-0.2
Depth		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	129	91	122	124	131

Organophosphorus Pesticides						
Our Reference:	UNITS	98070-33	98070-37	98070-38	98070-39	98070-40
Your Reference	-----	TP21	SP01	SP02	SP03	SP04
Depth	-----	0.0-0.2	-	0.0-0.4	-	-
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	128	120	123	126	119

Organophosphorus Pesticides		
Our Reference:	UNITS	98070-43
Your Reference	-----	SP05
Depth	-----	0.5-0.6
Date Sampled		25/09/2013
Type of sample		Soil
Date extracted	-	27/09/2013
Date analysed	-	27/09/2013
Diazinon	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Surrogate TCMX	%	133

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-1 TP01 0.0-0.2 25/09/2013 Soil	98070-7 TP04 0.0-0.2 25/09/2013 Soil	98070-11 TP06 0.0-0.2 25/09/2013 Soil	98070-13 TP07 0.0-0.2 25/09/2013 Soil	98070-22 TP14 0.0-0.1 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	129	129	130	121	129

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-23 TP15 0.0-0.2 25/09/2013 Soil	98070-28 TP18 0.0-0.2 25/09/2013 Soil	98070-33 TP21 0.0-0.2 25/09/2013 Soil	98070-37 SP01 - 25/09/2013 Soil	98070-38 SP02 0.0-0.4 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	91	122	128	120	123

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-39 SP03 - 25/09/2013 Soil	98070-40 SP04 - 25/09/2013 Soil	98070-43 SP05 0.5-0.6 25/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	126	119	133

Acid Extractable metals in soil						
Our Reference:	UNITS	98070-1	98070-4	98070-6	98070-7	98070-10
Your Reference	-----	TP01	TP02	TP03	TP04	TP05
Depth	-----	0.0-0.2	0.2-0.4	0.4-0.5	0.0-0.2	0.3-0.4
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Arsenic	mg/kg	6	5	5	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	18	17	20	10
Copper	mg/kg	25	24	21	22	18
Lead	mg/kg	21	15	11	23	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	8	7	10	5
Zinc	mg/kg	41	34	28	52	32
Iron	mg/kg	[NA]	[NA]	27,000	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference:	UNITS	98070-11	98070-13	98070-14	98070-15	98070-17
Your Reference	-----	TP06	TP07	TP08	TP09	TP10
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Arsenic	mg/kg	5	6	7	8	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	28	19	17	19	19
Copper	mg/kg	39	23	24	26	26
Lead	mg/kg	26	20	16	18	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	29	11	11	14	7
Zinc	mg/kg	71	43	54	47	39
Iron	mg/kg	[NA]	[NA]	34,000	[NA]	52,000

Acid Extractable metals in soil						
Our Reference:	UNITS	98070-19	98070-21	98070-22	98070-23	98070-24
Your Reference	-----	TP12	TP13	TP14	TP15	TP16
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.1	0.0-0.2	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Arsenic	mg/kg	<4	5	6	5	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	1	24	19	22	16
Copper	mg/kg	2	30	24	25	15
Lead	mg/kg	1	16	18	21	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	31	12	20	8
Zinc	mg/kg	4	52	46	51	44
Iron	mg/kg	[NA]	[NA]	43,000	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference:	UNITS	98070-27	98070-28	98070-30	98070-31	98070-33
Your Reference	-----	TP17	TP18	TP19	TP20	TP21
Depth	-----	0.3-0.5	0.0-0.2	0.6-0.7	0.0-0.2	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Arsenic	mg/kg	6	4	4	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	28	28	15	31	19
Copper	mg/kg	22	22	39	48	29
Lead	mg/kg	25	22	17	37	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	10	13	16	11
Zinc	mg/kg	45	47	64	82	75

Acid Extractable metals in soil						
Our Reference:	UNITS	98070-34	98070-37	98070-38	98070-39	98070-40
Your Reference	-----	TP21	SP01	SP02	SP03	SP04
Depth	-----	0.8-1.0	-	0.0-0.4	-	-
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Arsenic	mg/kg	<4	<4	<4	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	5	16	12	21
Copper	mg/kg	23	67	36	19	29
Lead	mg/kg	20	6	10	11	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	87	13	11
Zinc	mg/kg	35	31	63	31	56

Acid Extractable metals in soil			
Our Reference:	UNITS	98070-43	98070-45
Your Reference	-----	SP05	TP13- TRIPLICATE
Depth	-----	0.5-0.6	0.0-0.2
Date Sampled		25/09/2013	25/09/2013
Type of sample		Soil	Soil
Date digested	-	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013
Arsenic	mg/kg	<4	6
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	7	25
Copper	mg/kg	12	31
Lead	mg/kg	8	15
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	10	30
Zinc	mg/kg	25	46

Phenoxy Acid Herbicides in Soil				
Our Reference:	UNITS	98070-10	98070-30	98070-31
Your Reference	-----	TP05	TP19	TP20
Depth	-----	0.3-0.4	0.6-0.7	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil
Date extracted	-	03/10/2013	03/10/2013	03/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
Dicamba	mg/kg	<0.1	<0.1	<0.1
MCPA	mg/kg	<0.1	<0.1	<0.1
Dichlorprop	mg/kg	<0.1	<0.1	<0.1
2,4-D	mg/kg	<0.1	<0.1	<0.1
2,4,5-T	mg/kg	<0.1	<0.1	<0.1
2,4,5-TP	mg/kg	<0.1	<0.1	<0.1
2,4-DB	mg/kg	<0.1	<0.1	<0.1
MCPP	mg/kg	<0.1	<0.1	<0.1
Triclopyr	mg/kg	<0.1	<0.1	<0.1
Picloram	mg/kg	<0.1	<0.1	<0.1
Clopyralid	mg/kg	<0.1	<0.1	<0.1
Fluroxypyr	mg/kg	<0.1	<0.1	<0.1

Trazine Herbicides in Soil				
Our Reference:	UNITS	98070-10	98070-30	98070-31
Your Reference	-----	TP05	TP19	TP20
Depth	-----	0.3-0.4	0.6-0.7	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil
Atrazine	mg/kg	<0.1	<0.1	<0.1
Hexazinone	mg/kg	<0.1	<0.1	<0.1
Metribuzine	mg/kg	<0.1	<0.1	<0.1
Prometryne	mg/kg	<0.1	<0.1	<0.1
Simazine	mg/kg	<0.1	<0.1	<0.1

Miscellaneous Inorg - soil					
Our Reference:	UNITS	98070-6	98070-14	98070-17	98070-22
Your Reference	-----	TP03	TP08	TP10	TP14
Depth	-----	0.4-0.5	0.0-0.2	0.0-0.2	0.0-0.1
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013
pH 1:5 soil:water	pH Units	5.4	5.6	5.2	5.4
Organic Matter, Walkely Black	mg/kg	4,700	6,100	8,300	8,600

ESP/CEC Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-6 TP03 0.4-0.5 25/09/2013 Soil	98070-14 TP08 0.0-0.2 25/09/2013 Soil	98070-17 TP10 0.0-0.2 25/09/2013 Soil	98070-22 TP14 0.0-0.1 25/09/2013 Soil
Exchangeable Ca	meq/100g	1.0	1.5	0.8	2.5
Exchangeable K	meq/100g	0.2	0.3	0.3	0.3
Exchangeable Mg	meq/100g	7.2	10	7.5	10
Exchangeable Na	meq/100g	1.3	1.1	1.2	2.0
Cation Exchange Capacity	meq/100g	9.7	13	9.8	15

Moisture						
Our Reference:	UNITS	98070-1	98070-4	98070-6	98070-7	98070-10
Your Reference	-----	TP01	TP02	TP03	TP04	TP05
Depth	-----	0.0-0.2	0.2-0.4	0.4-0.5	0.0-0.2	0.3-0.4
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	11	13	13	12	18

Moisture						
Our Reference:	UNITS	98070-11	98070-13	98070-14	98070-15	98070-17
Your Reference	-----	TP06	TP07	TP08	TP09	TP10
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	9.2	13	11	10	13

Moisture						
Our Reference:	UNITS	98070-18	98070-19	98070-21	98070-22	98070-23
Your Reference	-----	TP11	TP12	TP13	TP14	TP15
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	12	14	13	11	9.2

Moisture						
Our Reference:	UNITS	98070-24	98070-27	98070-28	98070-30	98070-31
Your Reference	-----	TP16	TP17	TP18	TP19	TP20
Depth	-----	0.0-0.2	0.3-0.5	0.0-0.2	0.6-0.7	0.0-0.2
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	11	17	13	16	15

Moisture						
Our Reference:	UNITS	98070-33	98070-34	98070-35	98070-36	98070-37
Your Reference	-----	TP21	TP21	TP22	TP22	SP01
Depth	-----	0.0-0.2	0.8-1.0	0.0-0.2	0.5-0.7	-
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	19	19	12	15	8.9

Moisture					
Our Reference:	UNITS	98070-38	98070-39	98070-40	98070-43
Your Reference	-----	SP02	SP03	SP04	SP05
Depth	-----	0.0-0.4	-	-	0.5-0.6
Date Sampled		25/09/2013	25/09/2013	25/09/2013	25/09/2013
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	5.5	6.8	9.2	4.5

Asbestos ID - soils WA Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-1 TP01 0.0-0.2 25/09/2013 Soil	98070-7 TP04 0.0-0.2 25/09/2013 Soil	98070-11 TP06 0.0-0.2 25/09/2013 Soil	98070-13 TP07 0.0-0.2 25/09/2013 Soil	98070-15 TP09 0.0-0.2 25/09/2013 Soil
Date analysed	-	2/10/2013	2/10/2013	2/10/2013	2/10/2013	2/10/2013
Sample mass tested	g	545.18g	520.01g	566.93g	499.51g	588.29g
Sample Description	-	Reddish brown coarse-grained soil	Brown fine-grained soil & rocks	Dark grey fine-grained soil	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98070-17 TP10 0.0-0.2 25/09/2013 Soil	98070-22 TP14 0.0-0.1 25/09/2013 Soil	98070-37 SP01 - 25/09/2013 Soil	98070-38 SP02 0.0-0.4 25/09/2013 Soil	98070-39 SP03 - 25/09/2013 Soil
Date analysed	-	2/10/2013	2/10/2013	2/10/2013	2/10/2013	2/10/2013
Sample mass tested	g	467.54g	457.32g	509.36g	571.99g	467.36g
Sample Description	-	Reddish brown coarse-grained soil	Reddish brown coarse-grained soil	Grey fine-grained soil	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA			
Our Reference:	UNITS	98070-40	98070-43
Your Reference	-----	SP04	SP05
Depth	-----	-	0.5-0.6
Date Sampled		25/09/2013	25/09/2013
Type of sample		Soil	Soil
Date analysed	-	2/10/2013	2/10/2013
Sample mass tested	g	475.14g	486.20g
Sample Description	-	Brown coarse- grained soil & rocks	Reddish brown coarse- grained 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
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils			
Our Reference:	UNITS	98070-10	98070-23
Your Reference:	-----	TP05	TP15
Depth	-----	0.3-0.4	0.0-0.2
Date Sampled		25/09/2013	25/09/2013
Type of sample		Soil	Soil
Date analysed	-	1/10/2013	1/10/2013
Sample mass tested	g	Approx 30g	Approx 40g
Sample Description	-	Pink-grey fine-grained clay soil	Brown fine- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected

Asbestos ID - materials		
Our Reference:	UNITS	98070-44
Your Reference	-----	SP04-A
Depth	-----	-
Date Sampled		25/09/2013
Type of sample		Material
Date analysed	-	1/10/2013
Mass / Dimension of Sample	-	68x52x9mm
Sample Description	-	Brown compressed fibre cement material
Asbestos ID in materials	-	No asbestos detected

Method ID	Methodology Summary
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-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
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. Note Naphthalene is determined from the VOC analysis.
Org-012 subset	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.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	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.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-036	Total Organic Matter - A titrimetric method that measures the oxidisable organic content of soils. Based upon Rayment and Lyons 2011 where TOM is estimated as = TOC * 1.724.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soil based on Rayment and Lyons 2011.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-003	Asbestos ID - Minimum 500mL soil sample was analysed as recommended by "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg as per AS4964-2004.
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
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	98070-1	<25 <25	LCS-7	116%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	98070-1	<25 <25	LCS-7	116%
Benzene	mg/kg	0.2	Org-016	<0.2	98070-1	<0.2 <0.2	LCS-7	118%
Toluene	mg/kg	0.5	Org-016	<0.5	98070-1	<0.5 <0.5	LCS-7	118%
Ethylbenzene	mg/kg	1	Org-016	<1	98070-1	<1 <1	LCS-7	115%
m+p-xylene	mg/kg	2	Org-016	<2	98070-1	<2 <2	LCS-7	114%
o-Xylene	mg/kg	1	Org-016	<1	98070-1	<1 <1	LCS-7	113%
naphthalene	mg/kg	1	Org-014	<1	98070-1	<1 <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	97	98070-1	91 93 RPD: 2	LCS-7	95%
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	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-8	27/09/2013
Date analysed	-			30/09/2013	98070-1	30/09/2013 30/09/2013	LCS-8	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	98070-1	<50 <50	LCS-8	118%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	98070-1	<100 <100	LCS-8	114%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	98070-1	<100 <100	LCS-8	105%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	98070-1	<50 <50	LCS-8	118%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	98070-1	<100 <100	LCS-8	114%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	98070-1	<100 <100	LCS-8	105%
Surrogate o-Terphenyl	%		Org-003	97	98070-1	109 114 RPD: 4	LCS-8	99%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	113%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	115%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	102%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	97%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	119%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	LCS-7	97%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	98070-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	98070-1	<0.05 <0.05	LCS-7	106%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	98	98070-1	99 118 RPD: 18	LCS-7	93%
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	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
HCB	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	88%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	92%
Heptachlor	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	73%
delta-BHC	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	93%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	86%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	93%
Dieldrin	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	89%
Endrin	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	71%
pp-DDD	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	92%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	LCS-7	75%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	114	98070-1	129 131 RPD: 2	LCS-7	113%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Diazinon	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	LCS-7	67%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	LCS-7	97%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	98070-1	<0.1 <0.1	LCS-7	74%
Surrogate TCMX	%		Org-008	114	98070-1	129 131 RPD: 2	LCS-7	102%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-			27/09/2013	98070-1	27/09/2013 27/09/2013	LCS-7	27/09/2013
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	LCS-7	107%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	98070-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-006	114	98070-1	129 131 RPD: 2	LCS-7	106%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			30/09/2013	98070-1	27/09/2013 27/09/2013	LCS-1	27/09/2013
Date analysed	-			30/09/2013	98070-1	30/09/2013 30/09/2013	LCS-1	30/09/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	98070-1	6 6 RPD: 0	LCS-1	100%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	98070-1	<0.4 <0.4	LCS-1	105%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	98070-1	19 21 RPD: 10	LCS-1	104%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	98070-1	25 26 RPD: 4	LCS-1	105%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	98070-1	21 22 RPD: 5	LCS-1	101%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	98070-1	<0.1 <0.1	LCS-1	89%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	98070-1	10 11 RPD: 10	LCS-1	104%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	98070-1	41 41 RPD: 0	LCS-1	103%
Iron	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	107%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Phenoxy Acid Herbicides in Soil						Base II Duplicate II %RPD		
Date extracted	-			03/10/2013	[NT]	[NT]	LCS-1	03/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-1	04/10/2013
Dicamba	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	69%
MCPA	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	107%
Dichlorprop	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	84%
2,4-D	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	105%
2,4,5-T	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	76%
2,4,5-TP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	85%
2,4-DB	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	72%
MOPP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	115%
Triclopyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	65%
Picloram	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Clopyralid	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Fluroxypyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	62%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Trazine Herbicides in Soil						Base II Duplicate II %RPD		
Atrazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	65%
Hexazinone	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Metribuzine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Prometryne	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Simazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Miscellaneous Inorg - soil						Base II Duplicate II %RPD		
Date prepared	-			28/09/2013	98070-6	28/09/2013 28/09/2013	LCS-4	27/09/2013
Date analysed	-			28/09/2013	98070-6	28/09/2013 28/09/2013	LCS-4	27/09/2013
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	98070-6	5.4 [N/T]	LCS-4	101%
Organic Matter, Walkely Black	mg/kg	1000	Inorg-036	<1000	98070-6	4700 4700 RPD: 0	LCS-4	90%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
ESP/CEC						Base Duplicate %RPD		
Exchangeable Ca	meq/100 g	0.1	Metals-009	<0.1	98070-6	1.0 1.2 RPD: 18	LCS-1	96%
Exchangeable K	meq/100 g	0.1	Metals-009	<0.1	98070-6	0.2 0.2 RPD: 0	LCS-1	94%
Exchangeable Mg	meq/100 g	0.1	Metals-009	<0.1	98070-6	7.2 7.5 RPD: 4	LCS-1	92%
Exchangeable Na	meq/100 g	0.1	Metals-009	<0.1	98070-6	1.3 1.2 RPD: 8	LCS-1	101%
Cation Exchange Capacity	meq/100 g	1	Metals-009	<1.0	98070-6	9.7 10 RPD: 3	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Moisture								
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - soils WA								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - soils								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - materials								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	Dup. Sm#		Duplicate		Spike Sm#	Spike % Recovery	
vTRH(C6-C10)/BTEXN in Soil				Base + Duplicate + %RPD				
Date extracted	-	98070-21		27/09/2013 27/09/2013		LCS-8	27/09/2013	
Date analysed	-	98070-21		27/09/2013 27/09/2013		LCS-8	27/09/2013	
TRHC ₆ - C ₉	mg/kg	98070-21		<25 <25		LCS-8	124%	
TRHC ₆ - C ₁₀	mg/kg	98070-21		<25 <25		LCS-8	124%	
Benzene	mg/kg	98070-21		<0.2 <0.2		LCS-8	128%	
Toluene	mg/kg	98070-21		<0.5 <0.5		LCS-8	126%	
Ethylbenzene	mg/kg	98070-21		<1 <1		LCS-8	123%	
m+p-xylene	mg/kg	98070-21		<2 <2		LCS-8	122%	
o-Xylene	mg/kg	98070-21		<1 <1		LCS-8	121%	
naphthalene	mg/kg	98070-21		<1 <1		[NR]	[NR]	
Surrogate aaa-Trifluorotoluene	%	98070-21		93 92 RPD: 1		LCS-8	102%	

Client Reference: 43002, Eastern Creek

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-21	27/09/2013 27/09/2013	LCS-7	27/09/2013
Date analysed	-	98070-21	30/09/2013 30/09/2013	LCS-7	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	98070-21	<50 <50	LCS-7	134%
TRHC ₁₅ - C ₂₈	mg/kg	98070-21	<100 <100	LCS-7	118%
TRHC ₂₉ - C ₃₆	mg/kg	98070-21	<100 <100	LCS-7	99%
TRH>C ₁₀ -C ₁₆	mg/kg	98070-21	<50 <50	LCS-7	134%
TRH>C ₁₆ -C ₃₄	mg/kg	98070-21	<100 <100	LCS-7	118%
TRH>C ₃₄ -C ₄₀	mg/kg	98070-21	<100 <100	LCS-7	99%
Surrogate o-Terphenyl	%	98070-21	106 102 RPD: 4	LCS-7	117%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-21	27/09/2013 27/09/2013	LCS-8	27/09/2013
Date analysed	-	98070-21	27/09/2013 27/09/2013	LCS-8	27/09/2013
Naphthalene	mg/kg	98070-21	<0.1 <0.1	LCS-8	113%
Acenaphthylene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98070-21	<0.1 <0.1	LCS-8	110%
Phenanthrene	mg/kg	98070-21	<0.1 <0.1	LCS-8	102%
Anthracene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98070-21	<0.1 <0.1	LCS-8	98%
Pyrene	mg/kg	98070-21	<0.1 <0.1	LCS-8	124%
Benzo(a)anthracene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98070-21	<0.1 <0.1	LCS-8	96%
Benzo(b+k)fluoranthene	mg/kg	98070-21	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98070-21	<0.05 <0.05	LCS-8	100%
Indeno(1,2,3-c,d)pyrene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	98070-21	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98070-21	103 109 RPD: 6	LCS-8	97%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
Date analysed	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
HCB	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	98070-37	<0.1 <0.1	LCS-8	84%
gamma-BHC	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	98070-37	<0.1 <0.1	LCS-8	91%
Heptachlor	mg/kg	98070-37	<0.1 <0.1	LCS-8	71%
delta-BHC	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	98070-37	<0.1 <0.1	LCS-8	91%
Heptachlor Epoxide	mg/kg	98070-37	<0.1 <0.1	LCS-8	86%
gamma-Chlordane	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	98070-37	<0.1 <0.1	LCS-8	96%
Dieldrin	mg/kg	98070-37	<0.1 <0.1	LCS-8	91%
Endrin	mg/kg	98070-37	<0.1 <0.1	LCS-8	73%
pp-DDD	mg/kg	98070-37	<0.1 <0.1	LCS-8	99%
Endosulfan II	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	98070-37	<0.1 <0.1	LCS-8	80%
Methoxychlor	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%	98070-37	120 137 RPD: 13	LCS-8	110%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
Date analysed	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
Diazinon	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	98070-37	<0.1 <0.1	LCS-8	67%
Fenitrothion	mg/kg	98070-37	<0.1 <0.1	LCS-8	96%
Bromophos-ethyl	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	98070-37	<0.1 <0.1	LCS-8	72%
Surrogate TCMX	%	98070-37	120 137 RPD: 13	LCS-8	101%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
Date analysed	-	98070-37	27/09/2013 27/09/2013	LCS-8	27/09/2013
Arochlor 1016	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	98070-37	<0.1 <0.1	LCS-8	104%
Arochlor 1260	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	98070-37	120 137 RPD: 13	LCS-8	106%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98070-21	27/09/2013 27/09/2013	LCS-2	30/09/2013
Date analysed	-	98070-21	30/09/2013 30/09/2013	LCS-2	30/09/2013
Arsenic	mg/kg	98070-21	5 5 RPD: 0	LCS-2	102%
Cadmium	mg/kg	98070-21	<0.4 <0.4	LCS-2	107%
Chromium	mg/kg	98070-21	24 37 RPD: 43	LCS-2	106%
Copper	mg/kg	98070-21	30 39 RPD: 26	LCS-2	105%
Lead	mg/kg	98070-21	16 14 RPD: 13	LCS-2	103%
Mercury	mg/kg	98070-21	<0.1 <0.1	LCS-2	88%
Nickel	mg/kg	98070-21	31 65 RPD: 71	LCS-2	105%
Zinc	mg/kg	98070-21	52 56 RPD: 7	LCS-2	104%
Iron	mg/kg	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	98070-14	28/09/2013
Date analysed	-	[NT]	[NT]	98070-14	28/09/2013
pH 1:5 soil:water	pH Units	[NT]	[NT]	[NR]	[NR]
Organic Matter, Walkely Black	mg/kg	[NT]	[NT]	98070-14	120%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	98070-7	27/09/2013
Date analysed	-	98070-37	27/09/2013 27/09/2013	98070-7	27/09/2013
TRHC ₆ - C ₉	mg/kg	98070-37	<25 <25	98070-7	106%
TRHC ₆ - C ₁₀	mg/kg	98070-37	<25 <25	98070-7	106%
Benzene	mg/kg	98070-37	<0.2 <0.2	98070-7	108%
Toluene	mg/kg	98070-37	<0.5 <0.5	98070-7	109%
Ethylbenzene	mg/kg	98070-37	<1 <1	98070-7	106%
m+p-xylene	mg/kg	98070-37	<2 <2	98070-7	104%
o-Xylene	mg/kg	98070-37	<1 <1	98070-7	104%
naphthalene	mg/kg	98070-37	<1 <1	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	98070-37	87 82 RPD: 6	98070-7	85%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	98070-7	27/09/2013
Date analysed	-	98070-37	30/09/2013 30/09/2013	98070-7	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	98070-37	<50 <50	98070-7	138%
TRHC ₁₅ - C ₂₈	mg/kg	98070-37	<100 <100	98070-7	132%
TRHC ₂₉ - C ₃₆	mg/kg	98070-37	<100 <100	98070-7	140%
TRH>C ₁₀ -C ₁₆	mg/kg	98070-37	<50 <50	98070-7	138%
TRH>C ₁₆ -C ₃₄	mg/kg	98070-37	<100 <100	98070-7	132%
TRH>C ₃₄ -C ₄₀	mg/kg	98070-37	<100 <100	98070-7	140%
Surrogate o-Terphenyl	%	98070-37	90 106 RPD: 16	98070-7	113%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98070-37	27/09/2013 27/09/2013	98070-7	27/09/2013
Date analysed	-	98070-37	27/09/2013 27/09/2013	98070-7	27/09/2013
Naphthalene	mg/kg	98070-37	<0.1 <0.1	98070-7	120%
Acenaphthylene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98070-37	<0.1 <0.1	98070-7	115%
Phenanthrene	mg/kg	98070-37	<0.1 <0.1	98070-7	105%
Anthracene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98070-37	<0.1 <0.1	98070-7	102%
Pyrene	mg/kg	98070-37	<0.1 <0.1	98070-7	128%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(a)anthracene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98070-37	<0.1 <0.1	98070-7	93%
Benzo(b+k)fluoranthene	mg/kg	98070-37	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98070-37	<0.05 <0.05	98070-7	105%
Indeno(1,2,3-c,d)pyrene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	98070-37	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98070-37	105 116 RPD: 10	98070-7	99%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-7	27/09/2013
Date analysed	-	[NT]	[NT]	98070-7	27/09/2013
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	98070-7	109%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	98070-7	113%
Heptachlor	mg/kg	[NT]	[NT]	98070-7	105%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	98070-7	113%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	98070-7	107%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	98070-7	118%
Dieldrin	mg/kg	[NT]	[NT]	98070-7	110%
Endrin	mg/kg	[NT]	[NT]	98070-7	100%
pp-DDD	mg/kg	[NT]	[NT]	98070-7	128%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	98070-7	108%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	98070-7	114%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-7	27/09/2013
Date analysed	-	[NT]	[NT]	98070-7	27/09/2013
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	98070-7	104%
Fenitrothion	mg/kg	[NT]	[NT]	98070-7	140%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	98070-7	125%
Surrogate TCMX	%	[NT]	[NT]	98070-7	130%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-7	27/09/2013
Date analysed	-	[NT]	[NT]	98070-7	27/09/2013
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	98070-7	117%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	98070-7	137%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98070-37	27/09/2013 27/09/2013	98070-7	30/09/2013
Date analysed	-	98070-37	30/09/2013 30/09/2013	98070-7	30/09/2013
Arsenic	mg/kg	98070-37	<4 <4	98070-7	89%
Cadmium	mg/kg	98070-37	<0.4 <0.4	98070-7	86%
Chromium	mg/kg	98070-37	5 5 RPD: 0	98070-7	100%
Copper	mg/kg	98070-37	67 100 RPD: 40	98070-7	105%
Lead	mg/kg	98070-37	6 5 RPD: 18	98070-7	88%
Mercury	mg/kg	98070-37	<0.1 <0.1	98070-7	92%
Nickel	mg/kg	98070-37	6 5 RPD: 18	98070-7	85%
Zinc	mg/kg	98070-37	31 32 RPD: 3	98070-7	89%
Iron	mg/kg	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	27/09/2013
TRHC ₆ - C ₉	mg/kg	[NT]	[NT]	98070-38	117%
TRHC ₆ - C ₁₀	mg/kg	[NT]	[NT]	98070-38	117%
Benzene	mg/kg	[NT]	[NT]	98070-38	122%
Toluene	mg/kg	[NT]	[NT]	98070-38	115%
Ethylbenzene	mg/kg	[NT]	[NT]	98070-38	117%
m+p-xylene	mg/kg	[NT]	[NT]	98070-38	116%
o-Xylene	mg/kg	[NT]	[NT]	98070-38	116%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	[NT]	[NT]	98070-38	83%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	30/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	[NT]	[NT]	98070-38	97%
TRHC ₁₅ - C ₂₈	mg/kg	[NT]	[NT]	98070-38	89%
TRHC ₂₉ - C ₃₆	mg/kg	[NT]	[NT]	98070-38	93%
TRH>C ₁₀ -C ₁₆	mg/kg	[NT]	[NT]	98070-38	97%
TRH>C ₁₆ -C ₃₄	mg/kg	[NT]	[NT]	98070-38	89%
TRH>C ₃₄ -C ₄₀	mg/kg	[NT]	[NT]	98070-38	93%
Surrogate o-Terphenyl	%	[NT]	[NT]	98070-38	100%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	27/09/2013
Naphthalene	mg/kg	[NT]	[NT]	98070-38	109%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	98070-38	117%
Phenanthrene	mg/kg	[NT]	[NT]	98070-38	107%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	98070-38	101%
Pyrene	mg/kg	[NT]	[NT]	98070-38	129%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	98070-38	102%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	98070-38	103%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	98070-38	95%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	27/09/2013
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	98070-38	114%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	98070-38	114%
Heptachlor	mg/kg	[NT]	[NT]	98070-38	106%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	98070-38	116%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	98070-38	108%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	98070-38	115%
Dieldrin	mg/kg	[NT]	[NT]	98070-38	108%
Endrin	mg/kg	[NT]	[NT]	98070-38	95%
pp-DDD	mg/kg	[NT]	[NT]	98070-38	122%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	98070-38	99%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	98070-38	120%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	27/09/2013
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	98070-38	92%
Fenitrothion	mg/kg	[NT]	[NT]	98070-38	124%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	98070-38	100%
Surrogate TCMX	%	[NT]	[NT]	98070-38	117%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98070-38	27/09/2013
Date analysed	-	[NT]	[NT]	98070-38	27/09/2013
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	98070-38	106%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	98070-38	124%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	98070-38	30/09/2013
Date analysed	-	[NT]	[NT]	98070-38	30/09/2013
Arsenic	mg/kg	[NT]	[NT]	98070-38	92%
Cadmium	mg/kg	[NT]	[NT]	98070-38	84%
Chromium	mg/kg	[NT]	[NT]	98070-38	97%
Copper	mg/kg	[NT]	[NT]	98070-38	116%
Lead	mg/kg	[NT]	[NT]	98070-38	85%
Mercury	mg/kg	[NT]	[NT]	98070-38	89%
Nickel	mg/kg	[NT]	[NT]	98070-38	78%
Zinc	mg/kg	[NT]	[NT]	98070-38	92%
Iron	mg/kg	[NT]	[NT]	[NR]	[NR]

Report Comments:

Asbestos in Soil:

Samples 98070-10 & 23; 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.

This report is consistent with the analytical procedures and reporting recommendations in the Western Australian Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 98070-21 for Ni. Therefore a triplicate result has been issued as laboratory sample number 98070-45.

Triazine Herbicides & Phenoxy acid herbicides analysed by NMI. Report No.RN0992254.

Asbestos ID was analysed by Approved Identifier:	Alex Tam
Asbestos ID was authorised by Approved Signatory:	Matt Mansfield

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	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 and 10-140% for SVOC 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

CHAIN OF CUSTODY



PROJECT NO.: 43002						LABORATORY BATCH NO.											
PROJECT NAME Eastern Creek						SAMPLERS B. Regan, M. Greenwood											
SEND REPORT TO: J. Harding						SEND INVOICE TO: G. Ng											
DATE NEEDED BY: Standard JAT						PHONE:											
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:						QC LEVEL: NEPM 1999 (✓) EMAIL:											

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	8hm	VOCs	Herbicides	OCs/OPs	PCBs	ASLPTCLP	Fe	Organic Matter	CEC	PM	Asbestos	NOTES
1 TP01-0.0-0.2	SOIL	25/9/13		Bag & Jar			X	X	X			X	X						X	
2 TP01-0.4-0.5				Jar																
3 TP02-0.0-0.2				Bag & Jar																
4 TP02-0.2-0.4				Bag & Jar			X	X	X											
5 TP03-0.0-0.2				Bag & Jar																
6 TP03-0.4-0.5				Jar			X	X	X						X	X	X	X		
7 TP04-0.0-0.2				Bag & Jar			X	X	X			X	X						X	
8 TP04-0.3-0.4				Bag & Jar																
9 TP05-0.0-0.2				Jar																
10 TP05-0.3-0.4				Jar			X	X	X		X	X							X	
11 TP06-0.0-0.2				Bag & Jar			X	X	X			X	X						X	
12 TP06-0.4-0.5				Bag & Jar																
13 TP07-0.0-0.2				Bag & Jar			X	X	X			X	X						X	
14 TP08-0.0-0.2				Bag & Jar			X	X	X						X	X	X	X		
15 TP09-0.0-0.2				Bag & Jar			X	X	X										X	
16 TP09-0.4-0.5				Jar																
17 TP10-0.0-0.2				Bag & Jar			X	X	X						X	X	X	X	X	
18 TP11-0.0-0.2				Bag & Jar				X												

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: B. Regan	DATE: 26/9/13	CONSIGNMENT NOTE NO.		NAME: PT	DATE: 26/9/13	COOLER SEAL - Yes..... No Intact Broken	
OF: JBS		TRANSPORT CO.		OF: G		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

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

JBS Environmental Pty Ltd ABN 67 071 842 638
 Phone: (02) 8338-1011
 Fax: (02) 8338-1700

IMSO Forms013 - Chain of Custody

Suite 2, 595 Gardeners Road MASCOT NSW 2020
 PO Box 940 MASCOT NSW 1460
www.jbsgroup.com.au

CHAIN OF CUSTODY

PROJECT NO.: <u>43002</u>							LABORATORY BATCH NO.																																																																																																																																																																																																																																																																																																																																																																																																																								
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>MATRIX</th> <th>DATE</th> <th>TIME</th> <th>TYPE & PRESERVATIVE</th> <th>pH</th> <th>Lead</th> <th>PAHs</th> <th>TPH/BTEX</th> <th>ghm</th> <th>VOCs</th> <th>Herbicides</th> <th>OCs/OPPs</th> <th>PCBs</th> <th>ASLP/TCLP</th> <th>Fe</th> <th>Organic Matter</th> <th>VEC</th> <th>pH</th> <th>Asbestos</th> <th>NOTES</th> </tr> </thead> <tbody> <tr><td>19) TP12-0.0-0.2</td><td>SOIL</td><td>95/9/13</td><td></td><td>Jar</td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20) TP12-0.3-0.4</td><td></td><td></td><td></td><td>Jar</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>21) TP13-0.0-0.2⁰</td><td></td><td></td><td></td><td>Jar</td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>22) TP14-0.0-0.1</td><td></td><td></td><td></td><td>Bag & Jar</td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td></td><td></td></tr> <tr><td>23) TP15-0.0-0.2</td><td></td><td></td><td></td><td>Jar</td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td>24) TP16-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>25) TP16-0.2-0.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>26) TP17-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>27) TP17-0.3-0.5</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>28) TP18-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>29) TP19-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>30) TP19-0.6-0.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>31) TP20-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>32) TP20-0.4-0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>33) TP21-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>34) TP21-0.8-1.0</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>35) TP22-0.0-0.2</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>36) TP22-0.5-0.7</td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>																	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	ghm	VOCs	Herbicides	OCs/OPPs	PCBs	ASLP/TCLP	Fe	Organic Matter	VEC	pH	Asbestos	NOTES	19) TP12-0.0-0.2	SOIL	95/9/13		Jar		X	X	X													20) TP12-0.3-0.4				Jar																	21) TP13-0.0-0.2 ⁰				Jar		X	X	X													22) TP14-0.0-0.1				Bag & Jar		X	X	X				X	X		X	X	X	X			23) TP15-0.0-0.2				Jar		X	X	X				X	X					X			24) TP16-0.0-0.2						X	X	X													25) TP16-0.2-0.4																					26) TP17-0.0-0.2																					27) TP17-0.3-0.5						X	X	X													28) TP18-0.0-0.2						X	X	X				X	X								29) TP19-0.0-0.2																					30) TP19-0.6-0.7									X		X	X									31) TP20-0.0-0.2						X	X	X			X	X									32) TP20-0.4-0.5																					33) TP21-0.0-0.2						X	X	X				X	X								34) TP21-0.8-1.0						X	X	X													35) TP22-0.0-0.2						X	X														36) TP22-0.5-0.7						X	X													
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Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsrd.; C = Sodium Hydroxide Prsrd; VC = Hydrochloric Acid Prsrd Vial; VS = Sulfuric Acid Prsrd Vial; S = Sulfuric Acid Prsrd; Z = Zinc Prsrd; E = EDTA Prsrd; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY



PROJECT NO.: 43002						LABORATORY BATCH NO.																	
PROJECT NAME: Eastern Creek						SAMPLERS: B. Hagan, M. Greenwood																	
SEND REPORT TO: T. Harding						SEND INVOICE TO: G. Ng						PHONE:						EMAIL:					
DATE NEEDED BY: Standard TAT						QC LEVEL: NEPM 1999 (C)																	
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																							
						Lead	PAHs	TPH/BTEX	g/hm	VOCs	Herbicides	OCAs/OPPs	PCBs	Asp/TCPP	Fe	Organic Matter	CFC	pH	Asbestos	NOTES			
37	SPO1	SOIL	25/9/13		Bag + Jar		X	X	X			X	X					X					
38	SPO2 - 0.0-0.4				Bag + Jar		X	X	X			X	X					X					
39	SPO3				Bag + Jar		X	X	X			X	X					X					
40	SPO4				Bag + Jar		X	X	X			X	X					X					
41	QA03				Jar																		
42	QC03				Jar																		
43	SPO5 - 0.0-0.2				Bag + Jar																		
44	SPO5 - 0.5-0.6				Bag + Jar		X	X	X			X	X					X					
45	SPO4 - A	MATERIAL			Bag													X					

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: PT	DATE: 26/9/13	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO.		OF: ELS		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

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

JBS Environmental Pty Ltd ABN 67 071 842 638
 Phone: (02) 8338-1011
 Fax: (02) 8338-1700

Suite 2, 595 Gardeners Road MASCOT NSW 2020
 PO Box 940 MASCOT NSW 1450
www.jbsgroup.com.au

98070

CERTIFICATE OF ANALYSIS

98077

Client:

JBS & G (NSW & WA) Pty Ltd

Level 1, 50 Margaret St

Sydney

NSW 2000

Attention: T Harding, B Regan, M Greenwood

Sample log in details:

Your Reference:

43002, Eastern Creek

No. of samples:

2 waters, 42 soils

Date samples received / completed instructions received

25/09/13 / 26/09/13

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:

3/10/13 / 9/10/13

Date of Preliminary Report:

Not issued

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:



Jacinta Hurst
Laboratory Manager

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-24 BH13 0.0-0.1 24/09/2013 Soil	98077-37 BH19 0.0-0.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013
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

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-24 BH13 0.0-0.1 24/09/2013 Soil	98077-37 BH19 0.0-0.1 24/09/2013 Soil
1,2,3-trichloropropane	mg/kg	<1	<1
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	%	99	104
Surrogate aaa-Trifluorotoluene	%	103	104
Surrogate Toluene-d8	%	99	102
Surrogate 4-Bromofluorobenzene	%	82	80

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-1	98077-2	98077-3	98077-4	98077-5
Our Reference:	-----	BH01	BH01	BH02	BH02	BH03
Your Reference	-----	0.5-0.6	1.5-1.6	0.0-0.1	0.5-0.6	0.0-0.1
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	94	97	95	97

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-6	98077-7	98077-8	98077-9	98077-10
Our Reference:	-----	BH03	BH04	BH05	BH06	BH06
Your Reference	-----	0.5-0.6	0.0-0.1	0.0-0.2	0.0-0.1	0.6-0.7
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	100	96	101	95

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-11	98077-12	98077-13	98077-14	98077-15
Our Reference:	-----	BH07	BH08	BH08	BH09	BH09
Your Reference	-----	0.0-0.1	0.0-0.1	0.4-0.5	0.0-0.1	1.0-1.1
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	97	95	95	96

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-16	98077-17	98077-18	98077-19	98077-20
Our Reference:	-----	BH10	BH10	BH11	BH11	BH12
Your Reference	-----	0.0-0.1	1.5-1.6	0.0-0.1	1.5-1.6	0.0-0.2
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	92	96	95	93

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-21	98077-24	98077-25	98077-27	98077-31
Our Reference:	-----	QA01	BH13	BH13	BH14	BH16
Your Reference	-----	-	0.0-0.1	2.0-2.1	0.5-0.6	0.0-0.1
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	103	88	90	89

vTRH(C6-C10)/BTEXN in Soil	UNITS	98077-34	98077-35	98077-37	98077-40	98077-44
Our Reference:	-----	BH17	BH18	BH19	BH20	QA02
Your Reference	-----	0.5-0.6	0.0-0.1	0.0-0.1	0.9-1.0	-
Depth		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	29/09/2013	29/09/2013	29/09/2013	29/09/2013	29/09/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	86	90	104	98	83

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	98077-1	98077-2	98077-3	98077-4	98077-5
Your Reference	-----	BH01	BH01	BH02	BH02	BH03
Depth	-----	0.5-0.6	1.5-1.6	0.0-0.1	0.5-0.6	0.0-0.1
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	101	104	103	106	130

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	98077-6	98077-7	98077-8	98077-9	98077-10
Your Reference	-----	BH03	BH04	BH05	BH06	BH06
Depth	-----	0.5-0.6	0.0-0.1	0.0-0.2	0.0-0.1	0.6-0.7
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	107	105	108	106	104

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-11 BH07 0.0-0.1 24/09/2013 Soil	98077-12 BH08 0.0-0.1 24/09/2013 Soil	98077-13 BH08 0.4-0.5 24/09/2013 Soil	98077-14 BH09 0.0-0.1 24/09/2013 Soil	98077-15 BH09 1.0-1.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	104	107	100	108	102

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-16 BH10 0.0-0.1 24/09/2013 Soil	98077-17 BH10 1.5-1.6 24/09/2013 Soil	98077-18 BH11 0.0-0.1 24/09/2013 Soil	98077-19 BH11 1.5-1.6 24/09/2013 Soil	98077-20 BH12 0.0-0.2 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	103	103	101	98	99

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-21 QA01 - 24/09/2013 Soil	98077-24 BH13 0.0-0.1 24/09/2013 Soil	98077-25 BH13 2.0-2.1 24/09/2013 Soil	98077-27 BH14 0.5-0.6 24/09/2013 Soil	98077-31 BH16 0.0-0.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	99	99	106	90	92

svTRH (C10-C40) in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-34 BH17 0.5-0.6 24/09/2013 Soil	98077-35 BH18 0.0-0.1 24/09/2013 Soil	98077-37 BH19 0.0-0.1 24/09/2013 Soil	98077-40 BH20 0.9-1.0 24/09/2013 Soil	98077-44 QA02 - 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	89	92	91	90	88

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-1 BH01 0.5-0.6 24/09/2013 Soil	98077-2 BH01 1.5-1.6 24/09/2013 Soil	98077-3 BH02 0.0-0.1 24/09/2013 Soil	98077-4 BH02 0.5-0.6 24/09/2013 Soil	98077-5 BH03 0.0-0.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	0.14
Surrogate p-Terphenyl-d14	%	104	107	108	113	110

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-6 BH03 0.5-0.6 24/09/2013 Soil	98077-7 BH04 0.0-0.1 24/09/2013 Soil	98077-8 BH05 0.0-0.2 24/09/2013 Soil	98077-9 BH06 0.0-0.1 24/09/2013 Soil	98077-10 BH06 0.6-0.7 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.08	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	0.73	NIL (+)VE
Surrogate p-Terphenyl-d14	%	113	109	113	109	109

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-11 BH07 0.0-0.1 24/09/2013 Soil	98077-12 BH08 0.0-0.1 24/09/2013 Soil	98077-13 BH08 0.4-0.5 24/09/2013 Soil	98077-14 BH09 0.0-0.1 24/09/2013 Soil	98077-15 BH09 1.0-1.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	108	111	104	115	110

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-16 BH10 0.0-0.1 24/09/2013 Soil	98077-17 BH10 1.5-1.6 24/09/2013 Soil	98077-18 BH11 0.0-0.1 24/09/2013 Soil	98077-19 BH11 1.5-1.6 24/09/2013 Soil	98077-20 BH12 0.0-0.2 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	111	111	105	110	110

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-21 QA01 - 24/09/2013 Soil	98077-24 BH13 0.0-0.1 24/09/2013 Soil	98077-25 BH13 2.0-2.1 24/09/2013 Soil	98077-27 BH14 0.5-0.6 24/09/2013 Soil	98077-31 BH16 0.0-0.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	104	109	106	105	111

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-34 BH17 0.5-0.6 24/09/2013 Soil	98077-35 BH18 0.0-0.1 24/09/2013 Soil	98077-37 BH19 0.0-0.1 24/09/2013 Soil	98077-40 BH20 0.9-1.0 24/09/2013 Soil	98077-41 BH21 0.0-0.1 24/09/2013 Soil
Date extracted	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013	28/09/2013	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	107	112	111	109	113

PAHs in Soil			
Our Reference:	UNITS	98077-42	98077-44
Your Reference	-----	BH21	QA02
Depth	-----	0.6-0.7	-
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	28/09/2013	28/09/2013
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	104	107

Organochlorine Pesticides in soil			
Our Reference:	UNITS	98077-24	98077-37
Your Reference	-----	BH13	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013
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	%	110	111

Organophosphorus Pesticides			
Our Reference:	UNITS	98077-24	98077-37
Your Reference	-----	BH13	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013
Diazinon	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Surrogate TCMX	%	110	111

PCBs in Soil			
Our Reference:	UNITS	98077-24	98077-37
Your Reference:	-----	BH13	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date extracted	-	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013
Arochlor 1016	mg/kg	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	110	111

Acid Extractable metals in soil						
Our Reference:	UNITS	98077-3	98077-5	98077-8	98077-10	98077-17
Your Reference	-----	BH02	BH03	BH05	BH06	BH10
Depth	-----	0.0-0.1	0.0-0.1	0.0-0.2	0.6-0.7	1.5-1.6
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Lead	mg/kg	17	18	13	10	10

Acid Extractable metals in soil						
Our Reference:	UNITS	98077-20	98077-21	98077-24	98077-25	98077-27
Your Reference	-----	BH12	QA01	BH13	BH13	BH14
Depth	-----	0.0-0.2	-	0.0-0.1	2.0-2.1	0.5-0.6
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Arsenic	mg/kg	[NA]	[NA]	4	<4	<4
Cadmium	mg/kg	[NA]	[NA]	<0.4	<0.4	<0.4
Chromium	mg/kg	[NA]	[NA]	18	11	20
Copper	mg/kg	[NA]	[NA]	32	45	35
Lead	mg/kg	19	9	20	12	16
Mercury	mg/kg	[NA]	[NA]	<0.1	<0.1	<0.1
Nickel	mg/kg	[NA]	[NA]	14	9	14
Zinc	mg/kg	[NA]	[NA]	67	79	61
Iron	mg/kg	[NA]	[NA]	[NA]	38,000	39,000

Acid Extractable metals in soil						
Our Reference:	UNITS	98077-31	98077-34	98077-35	98077-37	98077-40
Your Reference	-----	BH16	BH17	BH18	BH19	BH20
Depth	-----	0.0-0.1	0.5-0.6	0.0-0.1	0.0-0.1	0.9-1.0
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Arsenic	mg/kg	5	<4	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	9	18	15	12
Copper	mg/kg	22	17	19	21	33
Lead	mg/kg	19	8	18	13	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	3	9	13	10
Zinc	mg/kg	60	18	30	44	53

Acid Extractable metals in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-41 BH21 0.0-0.1 24/09/2013 Soil	98077-42 BH21 0.6-0.7 24/09/2013 Soil	98077-44 QA02 - 24/09/2013 Soil	98077-45 BH13 - TRIPLICATE 2.0-2.1 24/09/2013 Soil
Date digested	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Arsenic	mg/kg	6	6	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	17	5	21
Copper	mg/kg	23	22	15	30
Lead	mg/kg	50	18	6	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	8	2	13
Zinc	mg/kg	70	34	15	55

Miscellaneous Inorg - soil			
Our Reference:	UNITS	98077-25	98077-27
Your Reference	-----	BH13	BH14
Depth	-----	2.0-2.1	0.5-0.6
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date prepared	-	28/09/2013	28/09/2013
Date analysed	-	28/09/2013	28/09/2013
pH 1:5 soil:water	pH Units	5.1	5.2
Organic Matter, Walkely Black	mg/kg	3,600	5,800

ESP/CEC			
Our Reference:	UNITS	98077-25	98077-27
Your Reference	-----	BH13	BH14
Depth	-----	2.0-2.1	0.5-0.6
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Exchangeable Ca	meq/100g	<0.1	0.3
Exchangeable K	meq/100g	0.2	0.2
Exchangeable Mg	meq/100g	5.4	4.8
Exchangeable Na	meq/100g	1.7	1.1
Cation Exchange Capacity	meq/100g	7.3	6.3

Moisture						
Our Reference:	UNITS	98077-1	98077-2	98077-3	98077-4	98077-5
Your Reference	-----	BH01	BH01	BH02	BH02	BH03
Depth	-----	0.5-0.6	1.5-1.6	0.0-0.1	0.5-0.6	0.0-0.1
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	16	16	11	19	5.8

Moisture						
Our Reference:	UNITS	98077-6	98077-7	98077-8	98077-9	98077-10
Your Reference	-----	BH03	BH04	BH05	BH06	BH06
Depth	-----	0.5-0.6	0.0-0.1	0.0-0.2	0.0-0.1	0.6-0.7
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	17	13	16	9.4	20

Moisture						
Our Reference:	UNITS	98077-11	98077-12	98077-13	98077-14	98077-15
Your Reference	-----	BH07	BH08	BH08	BH09	BH09
Depth	-----	0.0-0.1	0.0-0.1	0.4-0.5	0.0-0.1	1.0-1.1
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	14	14	13	13	13

Moisture						
Our Reference:	UNITS	98077-16	98077-17	98077-24	98077-25	98077-27
Your Reference	-----	BH10	BH10	BH13	BH13	BH14
Depth	-----	0.0-0.1	1.5-1.6	0.0-0.1	2.0-2.1	0.5-0.6
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	13	16	13	18	21

Moisture						
Our Reference:	UNITS	98077-31	98077-34	98077-35	98077-37	98077-40
Your Reference	-----	BH16	BH17	BH18	BH19	BH20
Depth	-----	0.0-0.1	0.5-0.6	0.0-0.1	0.0-0.1	0.9-1.0
Date Sampled		24/09/2013	24/09/2013	24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Moisture	%	10	16	9.8	8.0	14

Moisture				
Our Reference:	UNITS	98077-41	98077-42	98077-44
Your Reference	-----	BH21	BH21	QA02
Depth	-----	0.0-0.1	0.6-0.7	-
Date Sampled		24/09/2013	24/09/2013	24/09/2013
Type of sample		Soil	Soil	Soil
Date prepared	-	27/09/2013	27/09/2013	27/09/2013
Date analysed	-	30/09/2013	30/09/2013	30/09/2013
Moisture	%	12	19	19

Asbestos ID - soils WA			
Our Reference:	UNITS	98077-35	98077-37
Your Reference:	-----	BH18	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date analysed	-	30/09/2013	30/09/2013
Sample mass tested	g	962.77g	890.47g
Sample Description	-	Brown/orange coarse-grained soil	Beige coarse-grained 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
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected

Trazine Herbicides in Soil			
Our Reference:	UNITS	98077-24	98077-37
Your Reference	-----	BH13	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Atrazine	mg/kg	<0.1	<0.1
Hexazinone	mg/kg	<0.1	<0.1
Metribuzine	mg/kg	<0.1	<0.1
Prometryne	mg/kg	<0.1	<0.1
Simazine	mg/kg	<0.1	<0.1

Phenoxy Acid Herbicides in Soil			
Our Reference:	UNITS	98077-24	98077-37
Your Reference	-----	BH13	BH19
Depth	-----	0.0-0.1	0.0-0.1
Date Sampled		24/09/2013	24/09/2013
Type of sample		Soil	Soil
Date extracted	-	03/10/2013	03/10/2013
Date analysed	-	04/10/2013	04/10/2013
Dicamba	mg/kg	<0.1	<0.1
MCPA	mg/kg	<0.1	<0.1
Dichlorprop	mg/kg	<0.1	<0.1
2,4-D	mg/kg	<0.1	<0.1
2,4,5-T	mg/kg	<0.1	<0.1
2,4,5-TP	mg/kg	<0.1	<0.1
2,4-DB	mg/kg	<0.1	<0.1
MCPP	mg/kg	<0.1	<0.1
Triclopyr	mg/kg	<0.1	<0.1
Picloram	mg/kg	<0.1	<0.1
Clopyralid	mg/kg	<0.1	<0.1
Fluroxypyr	mg/kg	<0.1	<0.1

vTRH(C6-C10)/BTEXN in Water			
Our Reference:	UNITS	98077-22	98077-23
Your Reference	-----	TS	TB
Depth	-----	-	-
Date Sampled		24/09/2013	24/09/2013
Type of sample		water	water
Date extracted	-	28/09/2013	28/09/2013
Date analysed	-	28/09/2013	28/09/2013
TRHC ₆ - C ₉	µg/L	[NA]	<10
TRHC ₆ - C ₁₀	µg/L	[NA]	<10
TRHC ₆ - C ₁₀ less BTEX (F1)	µg/L	[NA]	<10
Benzene	µg/L	104%	<1
Toluene	µg/L	105%	<1
Ethylbenzene	µg/L	111%	<1
m+p-xylene	µg/L	112%	<2
o-xylene	µg/L	112%	<1
Naphthalene	µg/L	[NA]	<1
Surrogate Dibromofluoromethane	%	99	101
Surrogate toluene-d8	%	90	89
Surrogate 4-BFB	%	92	90

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)-BTEX 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. Note Naphthalene is determined from the VOC analysis.
Org-012 subset	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.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	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-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-036	Total Organic Matter - A titrimetric method that measures the oxidisable organic content of soils. Based upon Rayment and Lyons 2011 where TOM is estimated as = TOC * 1.724.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soil based on Rayment and Lyons 2011.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-003	Asbestos ID - Minimum 500mL soil sample was analysed as recommended by "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg as per AS4964-2004.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
Org-013	Water samples are analysed directly by purge and trap GC-MS.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Date analysed	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
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-5	85%
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-5	87%
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-5	98%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	96%
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-5	86%
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	97%
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-5	108%
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	98%
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	98	[NT]	[NT]	LCS-5	98%
Surrogate aaa-Trifluorotoluene	%		Org-014	98	[NT]	[NT]	LCS-5	103%
Surrogate Toluene-d8	%		Org-014	100	[NT]	[NT]	LCS-5	100%
Surrogate 4-Bromofluorobenzene	%		Org-014	84	[NT]	[NT]	LCS-5	83%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	98077-1	27/09/2013 27/09/2013	LCS-5	27/09/2013
Date analysed	-			29/09/2013	98077-1	29/09/2013 29/09/2013	LCS-5	29/09/2013
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	98077-1	<25 <25	LCS-5	129%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	98077-1	<25 <25	LCS-5	129%
Benzene	mg/kg	0.2	Org-016	<0.2	98077-1	<0.2 <0.2	LCS-5	121%
Toluene	mg/kg	0.5	Org-016	<0.5	98077-1	<0.5 <0.5	LCS-5	132%
Ethylbenzene	mg/kg	1	Org-016	<1	98077-1	<1 <1	LCS-5	127%
m+p-xylene	mg/kg	2	Org-016	<2	98077-1	<2 <2	LCS-5	133%
o-Xylene	mg/kg	1	Org-016	<1	98077-1	<1 <1	LCS-5	128%
naphthalene	mg/kg	1	Org-014	<1	98077-1	<1 <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	98	98077-1	96 94 RPD: 2	LCS-5	98%
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	-			27/09/2013	98077-1	27/09/2013 27/09/2013	LCS-5	27/09/2013
Date analysed	-			27/09/2013	98077-1	27/09/2013 27/09/2013	LCS-5	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	98077-1	<50 <50	LCS-5	124%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	98077-1	<100 <100	LCS-5	115%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	98077-1	<100 <100	LCS-5	84%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	98077-1	<50 <50	LCS-5	124%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	98077-1	<100 <100	LCS-5	115%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	98077-1	<100 <100	LCS-5	84%
Surrogate o-Terphenyl	%		Org-003	97	98077-1	101 102 RPD: 1	LCS-5	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	-			27/09/2013	98077-1	27/09/2013 27/09/2013	LCS-5	27/09/2013
Date analysed	-			28/09/2013	98077-1	28/09/2013 28/09/2013	LCS-5	28/09/2013
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	112%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	111%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	102%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	94%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	121%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	LCS-5	93%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	98077-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	98077-1	<0.05 <0.05	LCS-5	100%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	98077-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	109	98077-1	104 109 RPD: 5	LCS-5	100%
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	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Date analysed	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
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-5	89%
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-5	88%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	102%
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-5	92%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	86%
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-5	98%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	91%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	87%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	102%
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-5	116%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	106	[NT]	[NT]	LCS-5	103%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Date analysed	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Diazinon	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-5	83%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-5	123%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-5	100%
Surrogate TCMX	%		Org-008	106	[NT]	[NT]	LCS-5	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Date analysed	-			27/09/2013	[NT]	[NT]	LCS-5	27/09/2013
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-5	98%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	106	[NT]	[NT]	LCS-5	107%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			27/09/2013	98077-24	27/09/2013 27/09/2013	LCS-2	27/09/2013
Date analysed	-			27/09/2013	98077-24	27/09/2013 27/09/2013	LCS-2	27/09/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	98077-24	4 5 RPD: 22	LCS-2	99%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	98077-24	<0.4 <0.4	LCS-2	103%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	98077-24	18 18 RPD: 0	LCS-2	104%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	98077-24	32 27 RPD: 17	LCS-2	103%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	98077-24	20 17 RPD: 16	LCS-2	99%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	98077-24	<0.1 <0.1	LCS-2	83%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	98077-24	14 9 RPD: 43	LCS-2	105%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	98077-24	67 39 RPD: 53	LCS-2	102%
Iron	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	110%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Miscellaneous Inorg - soil						Base II Duplicate II %RPD		
Date prepared	-			28/09/2013	[NT]	[NT]	LCS-1	27/09/2013
Date analysed	-			28/09/2013	[NT]	[NT]	LCS-1	27/09/2013
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-1	100%
Organic Matter, Walkely Black	mg/kg	1000	Inorg-036	<1000	[NT]	[NT]	LCS-1	90%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
ESP/CEC						Base II Duplicate II %RPD		
Exchangeable Ca	meq/100 g	0.1	Metals-009	<0.1	[NT]	[NT]	LCS-1	96%
Exchangeable K	meq/100 g	0.1	Metals-009	<0.1	[NT]	[NT]	LCS-1	94%
Exchangeable Mg	meq/100 g	0.1	Metals-009	<0.1	[NT]	[NT]	LCS-1	92%
Exchangeable Na	meq/100 g	0.1	Metals-009	<0.1	[NT]	[NT]	LCS-1	101%
Cation Exchange Capacity	meq/100 g	1	Metals-009	<1.0	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Moisture								
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - soils WA								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Trazine Herbicides in Soil						Base II Duplicate II %RPD		
Atrazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	65%
Hexazinone	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Metribuzine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Prometryne	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Simazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Phenoxy Acid Herbicides in Soil						Base II Duplicate II %RPD		
Date extracted	-			03/10/2013	[NT]	[NT]	LCS-1	03/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-1	04/10/2013
Dicamba	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	69%
MCPA	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	107%
Dichlorprop	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	84%
2,4-D	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	105%
2,4,5-T	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	76%
2,4,5-TP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	85%
2,4-DB	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	72%
MOPP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	115%
Triclopyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	65%
Picloram	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Clopyralid	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Fluroxypyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	62%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Water						Base II Duplicate II %RPD		
Date extracted	-			28/09/2013	[NT]	[NT]	LCS-W1	28/09/2013
Date analysed	-			28/09/2013	[NT]	[NT]	LCS-W1	28/09/2013
TRHC ₆ - C ₉	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	116%
TRHC ₆ - C ₁₀	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	116%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	111%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	110%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	119%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	119%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	117%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	104	[NT]	[NT]	LCS-W1	94%
Surrogate toluene-d8	%		Org-016	100	[NT]	[NT]	LCS-W1	92%
Surrogate 4-BFB	%		Org-016	101	[NT]	[NT]	LCS-W1	92%
QUALITYCONTROL	UNITS	Dup. Sm#		Duplicate		Spike Sm#	Spike % Recovery	
vTRH(C6-C10)/BTEXN in Soil				Base + Duplicate + %RPD				
Date extracted	-	98077-11		27/09/2013 27/09/2013		LCS-6	27/09/2013	
Date analysed	-	98077-11		29/09/2013 29/09/2013		LCS-6	29/09/2013	
TRHC ₆ - C ₉	mg/kg	98077-11		<25 <25		LCS-6	114%	
TRHC ₆ - C ₁₀	mg/kg	98077-11		<25 <25		LCS-6	114%	
Benzene	mg/kg	98077-11		<0.2 <0.2		LCS-6	119%	
Toluene	mg/kg	98077-11		<0.5 <0.5		LCS-6	115%	
Ethylbenzene	mg/kg	98077-11		<1 <1		LCS-6	113%	

Client Reference: 43002, Eastern Creek

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
m+p-xylene	mg/kg	98077-11	<2 <2	LCS-6	111%
o-Xylene	mg/kg	98077-11	<1 <1	LCS-6	111%
naphthalene	mg/kg	98077-11	<1 <1	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	98077-11	97 98 RPD: 1	LCS-6	94%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-11	27/09/2013 27/09/2013	LCS-6	27/09/2013
Date analysed	-	98077-11	27/09/2013 27/09/2013	LCS-6	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	98077-11	<50 <50	LCS-6	94%
TRHC ₁₅ - C ₂₈	mg/kg	98077-11	<100 <100	LCS-6	97%
TRHC ₂₉ - C ₃₆	mg/kg	98077-11	<100 <100	LCS-6	80%
TRH>C ₁₀ -C ₁₆	mg/kg	98077-11	<50 <50	LCS-6	94%
TRH>C ₁₆ -C ₃₄	mg/kg	98077-11	<100 <100	LCS-6	97%
TRH>C ₃₄ -C ₄₀	mg/kg	98077-11	<100 <100	LCS-6	80%
Surrogate o-Terphenyl	%	98077-11	104 103 RPD: 1	LCS-6	109%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-11	27/09/2013 27/09/2013	LCS-6	27/09/2013
Date analysed	-	98077-11	28/09/2013 28/09/2013	LCS-6	28/09/2013
Naphthalene	mg/kg	98077-11	<0.1 <0.1	LCS-6	109%
Acenaphthylene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98077-11	<0.1 <0.1	LCS-6	108%
Phenanthrene	mg/kg	98077-11	<0.1 <0.1	LCS-6	99%
Anthracene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98077-11	<0.1 <0.1	LCS-6	91%
Pyrene	mg/kg	98077-11	<0.1 <0.1	LCS-6	117%
Benzo(a)anthracene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98077-11	<0.1 <0.1	LCS-6	90%
Benzo(b+k)fluoranthene	mg/kg	98077-11	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98077-11	<0.05 <0.05	LCS-6	98%
Indeno(1,2,3-c,d)pyrene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	98077-11	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98077-11	108 107 RPD: 1	LCS-6	96%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
Date analysed	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
Arsenic	mg/kg	98077-44	<4 <4	98077-37	95%
Cadmium	mg/kg	98077-44	<0.4 <0.4	98077-37	95%
Chromium	mg/kg	98077-44	5 8 RPD: 46	98077-37	95%
Copper	mg/kg	98077-44	15 18 RPD: 18	98077-37	101%
Lead	mg/kg	98077-44	6 8 RPD: 29	98077-37	98%
Mercury	mg/kg	98077-44	<0.1 <0.1	98077-37	80%
Nickel	mg/kg	98077-44	2 4 RPD: 67	98077-37	89%
Zinc	mg/kg	98077-44	15 18 RPD: 18	98077-37	109%
Iron	mg/kg	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	98077-24	27/09/2013 27/09/2013		
Date analysed	-	98077-24	27/09/2013 27/09/2013		
Dichlorodifluoromethane	mg/kg	98077-24	<1 <1		
Chloromethane	mg/kg	98077-24	<1 <1		
Vinyl Chloride	mg/kg	98077-24	<1 <1		
Bromomethane	mg/kg	98077-24	<1 <1		
Chloroethane	mg/kg	98077-24	<1 <1		
Trichlorofluoromethane	mg/kg	98077-24	<1 <1		
1,1-Dichloroethene	mg/kg	98077-24	<1 <1		
trans-1,2-dichloroethene	mg/kg	98077-24	<1 <1		
1,1-dichloroethane	mg/kg	98077-24	<1 <1		
cis-1,2-dichloroethene	mg/kg	98077-24	<1 <1		
bromochloromethane	mg/kg	98077-24	<1 <1		
chloroform	mg/kg	98077-24	<1 <1		
2,2-dichloropropane	mg/kg	98077-24	<1 <1		
1,2-dichloroethane	mg/kg	98077-24	<1 <1		
1,1,1-trichloroethane	mg/kg	98077-24	<1 <1		
1,1-dichloropropene	mg/kg	98077-24	<1 <1		
Cyclohexane	mg/kg	98077-24	<1 <1		
carbon tetrachloride	mg/kg	98077-24	<1 <1		
Benzene	mg/kg	98077-24	<0.2 <0.2		
dibromomethane	mg/kg	98077-24	<1 <1		
1,2-dichloropropane	mg/kg	98077-24	<1 <1		
trichloroethene	mg/kg	98077-24	<1 <1		
bromodichloromethane	mg/kg	98077-24	<1 <1		
trans-1,3-dichloropropene	mg/kg	98077-24	<1 <1		
cis-1,3-dichloropropene	mg/kg	98077-24	<1 <1		
1,1,2-trichloroethane	mg/kg	98077-24	<1 <1		

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Toluene	mg/kg	98077-24	<0.5 <0.5
1,3-dichloropropane	mg/kg	98077-24	<1 <1
dibromochloromethane	mg/kg	98077-24	<1 <1
1,2-dibromoethane	mg/kg	98077-24	<1 <1
tetrachloroethene	mg/kg	98077-24	<1 <1
1,1,1,2-tetrachloroethane	mg/kg	98077-24	<1 <1
chlorobenzene	mg/kg	98077-24	<1 <1
Ethylbenzene	mg/kg	98077-24	<1 <1
bromoform	mg/kg	98077-24	<1 <1
m+p-xylene	mg/kg	98077-24	<2 <2
styrene	mg/kg	98077-24	<1 <1
1,1,2,2-tetrachloroethane	mg/kg	98077-24	<1 <1
o-Xylene	mg/kg	98077-24	<1 <1
1,2,3-trichloropropane	mg/kg	98077-24	<1 <1
isopropylbenzene	mg/kg	98077-24	<1 <1
bromobenzene	mg/kg	98077-24	<1 <1
n-propyl benzene	mg/kg	98077-24	<1 <1
2-chlorotoluene	mg/kg	98077-24	<1 <1
4-chlorotoluene	mg/kg	98077-24	<1 <1
1,3,5-trimethyl benzene	mg/kg	98077-24	<1 <1
tert-butyl benzene	mg/kg	98077-24	<1 <1
1,2,4-trimethyl benzene	mg/kg	98077-24	<1 <1
1,3-dichlorobenzene	mg/kg	98077-24	<1 <1
sec-butyl benzene	mg/kg	98077-24	<1 <1
1,4-dichlorobenzene	mg/kg	98077-24	<1 <1
4-isopropyl toluene	mg/kg	98077-24	<1 <1
1,2-dichlorobenzene	mg/kg	98077-24	<1 <1
n-butyl benzene	mg/kg	98077-24	<1 <1
1,2-dibromo-3-chloropropane	mg/kg	98077-24	<1 <1
1,2,4-trichlorobenzene	mg/kg	98077-24	<1 <1
hexachlorobutadiene	mg/kg	98077-24	<1 <1
1,2,3-trichlorobenzene	mg/kg	98077-24	<1 <1
Surrogate Dibromofluorometha	%	98077-24	99 102 RPD: 3
Surrogate aaa- Trifluorotoluene	%	98077-24	103 104 RPD: 1
Surrogate Toluene-d8	%	98077-24	99 100 RPD: 1
Surrogate 4- Bromofluorobenzene	%	98077-24	82 80 RPD: 2

Client Reference: 43002, Eastern Creek

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-24	27/09/2013 27/09/2013	98077-2	27/09/2013
Date analysed	-	98077-24	29/09/2013 29/09/2013	98077-2	29/09/2013
TRHC ₆ - C ₉	mg/kg	98077-24	<25 <25	98077-2	137%
TRHC ₆ - C ₁₀	mg/kg	98077-24	<25 <25	98077-2	137%
Benzene	mg/kg	98077-24	<0.2 <0.2	98077-2	131%
Toluene	mg/kg	98077-24	<0.5 <0.5	98077-2	139%
Ethylbenzene	mg/kg	98077-24	<1 <1	98077-2	136%
m+p-xylene	mg/kg	98077-24	<2 <2	98077-2	139%
o-Xylene	mg/kg	98077-24	<1 <1	98077-2	137%
naphthalene	mg/kg	98077-24	<1 <1	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	98077-24	103 104 RPD: 1	98077-2	100%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-24	27/09/2013 27/09/2013	98077-2	27/09/2013
Date analysed	-	98077-24	27/09/2013 27/09/2013	98077-2	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	98077-24	<50 <50	98077-2	131%
TRHC ₁₅ - C ₂₈	mg/kg	98077-24	<100 <100	98077-2	120%
TRHC ₂₉ - C ₃₆	mg/kg	98077-24	<100 <100	98077-2	72%
TRH>C ₁₀ -C ₁₆	mg/kg	98077-24	<50 <50	98077-2	131%
TRH>C ₁₆ -C ₃₄	mg/kg	98077-24	<100 <100	98077-2	120%
TRH>C ₃₄ -C ₄₀	mg/kg	98077-24	<100 <100	98077-2	72%
Surrogate o-Terphenyl	%	98077-24	99 94 RPD: 5	98077-2	109%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-24	27/09/2013 27/09/2013	98077-2	27/09/2013
Date analysed	-	98077-24	28/09/2013 28/09/2013	98077-2	28/09/2013
Naphthalene	mg/kg	98077-24	<0.1 <0.1	98077-2	116%
Acenaphthylene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98077-24	<0.1 <0.1	98077-2	114%
Phenanthrene	mg/kg	98077-24	<0.1 <0.1	98077-2	105%
Anthracene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98077-24	<0.1 <0.1	98077-2	96%
Pyrene	mg/kg	98077-24	<0.1 <0.1	98077-2	123%
Benzo(a)anthracene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98077-24	<0.1 <0.1	98077-2	97%
Benzo(b+k)fluoranthene	mg/kg	98077-24	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98077-24	<0.05 <0.05	98077-2	105%
Indeno(1,2,3-c,d)pyrene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(g,h,i)perylene	mg/kg	98077-24	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98077-24	109 117 RPD: 7	98077-2	101%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	98077-24	27/09/2013 27/09/2013		
Date analysed	-	98077-24	27/09/2013 27/09/2013		
HCB	mg/kg	98077-24	<0.1 <0.1		
alpha-BHC	mg/kg	98077-24	<0.1 <0.1		
gamma-BHC	mg/kg	98077-24	<0.1 <0.1		
beta-BHC	mg/kg	98077-24	<0.1 <0.1		
Heptachlor	mg/kg	98077-24	<0.1 <0.1		
delta-BHC	mg/kg	98077-24	<0.1 <0.1		
Aldrin	mg/kg	98077-24	<0.1 <0.1		
Heptachlor Epoxide	mg/kg	98077-24	<0.1 <0.1		
gamma-Chlordane	mg/kg	98077-24	<0.1 <0.1		
alpha-chlordane	mg/kg	98077-24	<0.1 <0.1		
Endosulfan I	mg/kg	98077-24	<0.1 <0.1		
pp-DDE	mg/kg	98077-24	<0.1 <0.1		
Dieldrin	mg/kg	98077-24	<0.1 <0.1		
Endrin	mg/kg	98077-24	<0.1 <0.1		
pp-DDD	mg/kg	98077-24	<0.1 <0.1		
Endosulfan II	mg/kg	98077-24	<0.1 <0.1		
pp-DDT	mg/kg	98077-24	<0.1 <0.1		
Endrin Aldehyde	mg/kg	98077-24	<0.1 <0.1		
Endosulfan Sulphate	mg/kg	98077-24	<0.1 <0.1		
Methoxychlor	mg/kg	98077-24	<0.1 <0.1		
Surrogate TCMX	%	98077-24	110 121 RPD: 10		

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	98077-24	27/09/2013 27/09/2013		
Date analysed	-	98077-24	27/09/2013 27/09/2013		
Diazinon	mg/kg	98077-24	<0.1 <0.1		
Dimethoate	mg/kg	98077-24	<0.1 <0.1		
Chlorpyrifos-methyl	mg/kg	98077-24	<0.1 <0.1		
Ronnel	mg/kg	98077-24	<0.1 <0.1		
Chlorpyrifos	mg/kg	98077-24	<0.1 <0.1		
Fenitrothion	mg/kg	98077-24	<0.1 <0.1		
Bromophos-ethyl	mg/kg	98077-24	<0.1 <0.1		
Ethion	mg/kg	98077-24	<0.1 <0.1		
Surrogate TCMX	%	98077-24	110 121 RPD: 10		
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	98077-24	27/09/2013 27/09/2013		
Date analysed	-	98077-24	27/09/2013 27/09/2013		
Arochlor 1016	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1221	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1232	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1242	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1248	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1254	mg/kg	98077-24	<0.1 <0.1		
Arochlor 1260	mg/kg	98077-24	<0.1 <0.1		
Surrogate TCLMX	%	98077-24	110 121 RPD: 10		
QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98077-37	27/09/2013
Date analysed	-	[NT]	[NT]	98077-37	27/09/2013
Dichlorodifluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	[NT]	[NT]	98077-37	98%
cis-1,2-dichloroethene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	[NT]	[NT]	98077-37	109%
2,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	[NT]	[NT]	98077-37	112%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,1,1-trichloroethane	mg/kg	[NT]	[NT]	98077-37	109%
1,1-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	[NT]	[NT]	98077-37	95%
bromodichloromethane	mg/kg	[NT]	[NT]	98077-37	110%
trans-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	[NT]	[NT]	98077-37	119%
1,2-dibromoethane	mg/kg	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	[NT]	[NT]	98077-37	110%
1,1,1,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]
isopropylbenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,2,4-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	[NT]	[NT]	[NR]	[NR]
<i>Surrogate</i> Dibromofluorometha	%	[NT]	[NT]	98077-37	109%
<i>Surrogate</i> aaa- Trifluorotoluene	%	[NT]	[NT]	98077-37	109%
<i>Surrogate</i> Toluene-d ₈	%	[NT]	[NT]	98077-37	102%
<i>Surrogate</i> 4- Bromofluorobenzene	%	[NT]	[NT]	98077-37	67%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
Date analysed	-	98077-44	29/09/2013 29/09/2013	98077-37	29/09/2013
TRHC ₆ - C ₉	mg/kg	98077-44	<25 <25	98077-37	114%
TRHC ₆ - C ₁₀	mg/kg	98077-44	<25 <25	98077-37	114%
Benzene	mg/kg	98077-44	<0.2 <0.2	98077-37	120%
Toluene	mg/kg	98077-44	<0.5 <0.5	98077-37	118%
Ethylbenzene	mg/kg	98077-44	<1 <1	98077-37	112%
m+p-xylene	mg/kg	98077-44	<2 <2	98077-37	111%
o-Xylene	mg/kg	98077-44	<1 <1	98077-37	110%
naphthalene	mg/kg	98077-44	<1 <1	[NR]	[NR]
<i>Surrogate</i> aaa- Trifluorotoluene	%	98077-44	83 94 RPD: 12	98077-37	90%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
Date analysed	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
TRHC ₁₀ - C ₁₄	mg/kg	98077-44	<50 <50	98077-37	97%
TRHC ₁₅ - C ₂₈	mg/kg	98077-44	<100 <100	98077-37	106%
TRHC ₂₉ - C ₃₆	mg/kg	98077-44	<100 <100	98077-37	116%
TRH>C ₁₀ -C ₁₆	mg/kg	98077-44	<50 <50	98077-37	97%
TRH>C ₁₆ -C ₃₄	mg/kg	98077-44	<100 <100	98077-37	106%
TRH>C ₃₄ -C ₄₀	mg/kg	98077-44	<100 <100	98077-37	116%
<i>Surrogate</i> o-Terphenyl	%	98077-44	88 90 RPD: 2	98077-37	111%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98077-44	27/09/2013 27/09/2013	98077-37	27/09/2013
Date analysed	-	98077-44	28/09/2013 28/09/2013	98077-37	28/09/2013
Naphthalene	mg/kg	98077-44	<0.1 <0.1	98077-37	111%
Acenaphthylene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98077-44	<0.1 <0.1	98077-37	108%
Phenanthrene	mg/kg	98077-44	<0.1 <0.1	98077-37	100%
Anthracene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98077-44	<0.1 <0.1	98077-37	92%
Pyrene	mg/kg	98077-44	<0.1 <0.1	98077-37	118%
Benzo(a)anthracene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98077-44	<0.1 <0.1	98077-37	93%
Benzo(b+k)fluoranthene	mg/kg	98077-44	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98077-44	<0.05 <0.05	98077-37	102%
Indeno(1,2,3-c,d)pyrene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	98077-44	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98077-44	107 110 RPD: 3	98077-37	98%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98077-37	27/09/2013
Date analysed	-	[NT]	[NT]	98077-37	27/09/2013
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	98077-37	93%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	98077-37	90%
Heptachlor	mg/kg	[NT]	[NT]	98077-37	105%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	98077-37	97%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	98077-37	84%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	98077-37	102%
Dieldrin	mg/kg	[NT]	[NT]	98077-37	94%
Endrin	mg/kg	[NT]	[NT]	98077-37	92%
pp-DDD	mg/kg	[NT]	[NT]	98077-37	107%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	98077-37	121%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	98077-37	110%
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98077-37	27/09/2013
Date analysed	-	[NT]	[NT]	98077-37	27/09/2013
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	98077-37	84%
Fenitrothion	mg/kg	[NT]	[NT]	98077-37	122%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	98077-37	101%
Surrogate TCMX	%	[NT]	[NT]	98077-37	110%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98077-37	27/09/2013
Date analysed	-	[NT]	[NT]	98077-37	27/09/2013
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	98077-37	107%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	98077-37	109%

Report Comments:

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 98077-24 for Zn. Therefore a triplicate result has been issued as laboratory sample number 98077-45.

This report is consistent with the analytical procedures and reporting recommendations in the Western Australian Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009.

Triazine Herbicides & Phenoxy Acid Herbicides analysed by NMI. Report No.RN0992254.

Asbestos ID was analysed by Approved Identifier: Matt Mansfield
Asbestos ID was authorised by Approved Signatory: Matt Mansfield

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	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 and 10-140% for SVOC 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.

CHAIN OF CUSTODY



PROJECT NO.: 43002						LABORATORY BATCH NO.													
PROJECT NAME: Eastern Creek						SAMPLERS: B. Regan, M. Greenwood													
SEND REPORT TO: J. Harding						PHONE:													
SEND INVOICE TO: A. Ng						EMAIL:													
DATE NEEDED BY: Standard						QC LEVEL: NEPM 1999 (✓)													
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																			

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	Bhm	VOCs	Herbicides	OCs/OPPs	PCBs	AsCP/TCUP	te	Organic Matter	CEC	pH	Asbestos	NOTES
1) BH01-0.5-0.6	SOIL	24/9/13		Jar			X	X												
2) BH01-1.5-1.6							X	X												
3) BH02-0.0-0.1						X	X	X												
4) BH02-0.5-0.6							X	X												
5) BH03-0.0-0.1						X	X	X												
6) BH03-0.5-0.6							X	X												
7) BH04-0.0-0.1							X	X												
8) BH05-0.0-0.2						X	X	X												
9) BH06-0.0-0.1							X	X												
10) BH06-0.6-0.7						X	X	X												
11) BH07-0.0-0.1							X	X												
12) BH08-0.0-0.1							X	X												
13) BH08-0.4-0.5							X	X												
14) BH09-0.0-0.1							X	X												
15) BH09-1.0-1.1							X	X												
16) BH10-0.0-0.1							X	X												
17) BH10-1.5-1.6						X	X	X												

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

Job No: 98077

Date Received: 26/9/13
Time Received: 19:00
Received by: PT
Temp: Room Ambient
Cooling: Icepack
Security: Intact/Broken/None

[Sample on 25/9/13 17:00]

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: B. Regan	DATE: 25/9/13	CONSIGNMENT NOTE NO.		NAME: PT	DATE: 26/9/13	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS & Co		TRANSPORT CO.		OF: EU		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

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

CHAIN OF CUSTODY

PROJECT NO.: <u>43002</u>						LABORATORY BATCH NO.																																																																																																																																																																																																																																																																																																																																																																																																																										
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DATE NEEDED BY: <u>Standard</u>						QC LEVEL: <u>NEPM 1999 (✓)</u>																																																																																																																																																																																																																																																																																																																																																																																																																										
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>MATRIX</th> <th>DATE</th> <th>TIME</th> <th>TYPE & PRESERVATIVE</th> <th>pH</th> <th>Lead</th> <th>PAHs</th> <th>TPH/BTEX</th> <th>SEM</th> <th>VOCs</th> <th>Herbicides</th> <th>OCs/OPPs</th> <th>PCBs</th> <th>ASLP/PLP</th> <th>Fe</th> <th>Organic Matter</th> <th>CEC</th> <th>pH</th> <th>Asbestos</th> <th>NOTES</th> </tr> </thead> <tbody> <tr> <td>18. BH11-0.0-0.1</td> <td>SOIL</td> <td>24/9/13</td> <td></td> <td>Jar</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>19. BH11-1.5-1.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20. BH12-0.0-0.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>21. QAO1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>22. QCO2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="15">Send Jar to ALSF</td> </tr> <tr> <td>23. TS</td> <td>WATER</td> <td></td> <td></td> <td>VS</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>24. 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BH14-0.5-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>29. BH15-0.0-0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>30. BH15-0.5-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>31. BH15-1.4-1.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>32. BH16-0.0-0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>33. BH16-0.5-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>34. BH17-0.0-0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>35. BH17-0.5-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																		SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	SEM	VOCs	Herbicides	OCs/OPPs	PCBs	ASLP/PLP	Fe	Organic Matter	CEC	pH	Asbestos	NOTES	18. BH11-0.0-0.1	SOIL	24/9/13		Jar			X	X													19. BH11-1.5-1.6							X	X													20. BH12-0.0-0.2						X	X	X													21. QAO1						X	X	X													22. QCO2						Send Jar to ALSF															23. TS	WATER			VS				X													24. TB	WATER			VS				X													25. BH13-0.0-0.1	SOIL	24/9/13		Jar		X	X	X	X	X	X	X	X								26. BH13-2.0-2.1						X	X	X							X	X	X	X			27. BH14-0.1-0.2																					28. BH14-0.5-0.6						X	X	X							X	X	X	X			29. BH15-0.0-0.1																					30. BH15-0.5-0.6																					31. BH15-1.4-1.5																					32. 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RELINQUISHED BY:				METHOD OF SHIPMENT:				RECEIVED BY:				FOR RECEIVING LAB USE ONLY:			
NAME: <u>B. Regan</u>		DATE: <u>25/9/13</u>		CONSIGNMENT NOTE NO.		TRANSPORT CO.		NAME: <u>PT</u>		DATE: <u>26/9/13</u>		COOLER SEAL - Yes..... No..... Intact..... Broken.....			
OF: <u>JBS & G</u>								OF: <u>EB</u>				COOLER TEMP deg C			
NAME:		DATE:		CONSIGNMENT NOTE NO.		TRANSPORT CO.		NAME:		DATE:		COOLER SEAL - Yes..... No..... Intact..... Broken.....			
OF:								OF:				COOLER TEMP deg C			

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

CHAIN OF CUSTODY



PROJECT NO.: 42002						LABORATORY BATCH NO.													
PROJECT NAME Eastern Creek						SAMPLERS B. Regan, M. Curranwood													
SEND REPORT TO: T. Harding						SEND INVOICE TO: G. Ng						PHONE:						EMAIL:	
DATE NEEDED BY: Standard						QC LEVEL:						NEPM 1999 ()							
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																			

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	Bhm	VOCS	Herbicides	Pesticides	PCBs	ASL/PTCLP	Fe	Organic Matter	CEC	pH	Asbestos	NOTES
35 BH18-0.0-0.1	SOIL	24/9/13		Bag & Jar			X	X	X										X	
36 BH18-0.5-0.6				Jar																
37 BH19-0.0-0.1				Bag & Jar			X	X	X	X	X	X	X						X	
38 BH19-0.9-1.0				Jar																
39 BH20-6.0-0.1				Bag & Jar																
40 BH20-0.9-1.6				Jar			X	X	X											
41 BH21-0.0-0.1							X		X											
42 BH21-0.6-0.7							X		X											
43 BH21-1.4-1.5																				
44 QA02							X	X	X											
QC02							Send	to	ALSE											

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: B. Regan	DATE: 25/9/13	CONSIGNMENT NOTE NO.		NAME: PT	DATE: 26/9/13	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS+G		TRANSPORT CO.		OF: GLL		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

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CERTIFICATE OF ANALYSIS

98077-A

Client:

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

Attention: T Harding, B Regan, M Greenwood

Sample log in details:

Your Reference:	43002, Eastern Creek
No. of samples:	1 Additional
Date samples received / completed instructions received	25/09/13 / 3/10/13

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:	11/10/13 / 9/10/13
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

Asbestos ID - soils WA Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98077-A-39 BH20 0.0-0.1 24/09/2013 Soil
Date analysed	-	9/10/2013
Sample mass tested	g	710.69g
Sample Description	-	Brown coarse- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected

Method ID	Methodology Summary
ASB-003	Asbestos ID - Minimum 500mL soil sample was analysed as recommended by "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg as per AS4964-2004.

Report Comments:

This report is consistent with the analytical procedures and reporting recommendations in the Western Australian Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009.

Asbestos ID was analysed by Approved Identifier: Alex Tam
Asbestos ID was authorised by Approved Signatory: Matt Mansfield

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	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 and 10-140% for SVOC 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.

98077-A

Standard TIA due 11/10/13

CHAIN OF CUSTODY



PROJECT NO.: 43002							LABORATORY BATCH NO.																						
PROJECT NAME Eastern Creek							SAMPLERS B. Regan, M. Greenwood																						
SEND REPORT TO: T. Harding							SEND INVOICE TO: G. Ng							PHONE:						EMAIL:									
DATE NEEDED BY: Standard							QC LEVEL:							NEPM 1999 ()															
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																													
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/BTEX	Chm	VOCS	Herbicides	Pesticides	PCBs	Asbestos	Fe	Organic Matter	Chlorine	PM	Asbestos	NOTES									
BH18-0.0-0.1	SOIL	24/9/13		Bag & Jar		X	X	X											X										
BH18-0.5-0.6	↑	↑		Jar																									
BH19-0.0-0.1	↑	↑		Bag & Jar		X	X	X	X	X	X	X	X						X										
BH19-0.9-1.0	↑	↑		Jar																									
BH20-6.0-0.1	↑	↑		Bag & Jar															X										
BH20-0.9-1.0	↑	↑		Jar		X	X	X																					
BH21-0.0-0.1	↑	↑		↓		X		X																					
BH21-0.6-0.7	↑	↑		↓		X		X																					
BH21-1.4-1.5	↓	↓		↓		X	X	X																					
QA02	↓	↓		↓																									
QC02	↓	↓		↓		Send				to																			
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:						FOR RECEIVING LAB USE ONLY:											
NAME: B. Regan						DATE: 25/9/13						NAME: J. A. C.						DATE: 2/10/13						COOLER SEAL - Yes..... No..... Intact..... Broken.....					
OF: JBS+G												OF: EUS												COOLER TEMP..... deg C					
NAME:						DATE:						NAME:						DATE:						COOLER SEAL - Yes..... No..... Intact..... Broken.....					
OF:												OF:												COOLER TEMP..... deg C					

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JBS Environmental Pty Ltd ABN 67 071 842 638
Phone: (02) 8338-1011
Fax: (02) 8338-1700

Suite 2, 595 Gardeners Road MASCOT NSW 2020
PO Box 940 MASCOT NSW 1460
www.jbsgroup.com.au

CERTIFICATE OF ANALYSIS

98395

Client:

JBS & G (NSW & WA) Pty Ltd

Level 1, 50 Margaret St

Sydney

NSW 2000

Attention: T Harding, B Regan, M Greenwood

Sample log in details:

Your Reference:

43002, Eastern Creek

No. of samples:

7 waters, 1 material, 119 soils

Date samples received / completed instructions received

26/09/13-30/09/13/ 02/10/13

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:

15/10/13

/ 15/10/13

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

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-109 HA46 0.0-0.1 30/09/2013 Soil	98395-118 QA07 - 30/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013
Date analysed	-	05/10/2013	05/10/2013
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

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-109 HA46 0.0-0.1 30/09/2013 Soil	98395-118 QA07 - 30/09/2013 Soil
1,2,3-trichloropropane	mg/kg	<1	<1
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	%	109	119
Surrogate aaa-Trifluorotoluene	%	99	110
Surrogate Toluene-d8	%	101	107
Surrogate 4-Bromofluorobenzene	%	77	77

vTRH(C6-C10)/BTEXN in Soil	UNITS	98395-6	98395-7	98395-10	98395-34	98395-48
Our Reference:	-----	HA03	HA04	HA60	HA18	HA24
Your Reference	-----	0.2-0.4	0.0-0.2	0.0-0.1	0.0-0.2	0.0-0.2
Depth		26/09/2013	26/09/2013	26/09/2013	27/09/2013	27/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	121	118	120	127	117

vTRH(C6-C10)/BTEXN in Soil	UNITS	98395-58	98395-61	98395-105	98395-109	98395-111
Our Reference:	-----	BP02	BP04	HA42	HA46	HA48
Your Reference	-----	0.0-0.3	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Depth		27/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
TRHC ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	117	129	120	99	128

vTRH(C6-C10)/BTEXN in Soil		
Our Reference:	UNITS	98395-118
Your Reference	-----	QA07
Depth	-----	-
Date Sampled		30/09/2013
Type of sample		Soil
Date extracted	-	04/10/2013
Date analysed	-	05/10/2013
TRHC ₆ - C ₉	mg/kg	<25
TRHC ₆ - C ₁₀	mg/kg	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	118

svTRH (C10-C40) in Soil	UNITS	98395-6	98395-7	98395-10	98395-34	98395-48
Our Reference:	-----	HA03	HA04	HA60	HA18	HA24
Your Reference	-----	0.2-0.4	0.0-0.2	0.0-0.1	0.0-0.2	0.0-0.2
Depth		26/09/2013	26/09/2013	26/09/2013	27/09/2013	27/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	94	97	96	95	94

svTRH (C10-C40) in Soil	UNITS	98395-58	98395-61	98395-105	98395-109	98395-111
Our Reference:	-----	BP02	BP04	HA42	HA46	HA48
Your Reference	-----	0.0-0.3	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Depth		27/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	93	94	92	93	95

svTRH (C10-C40) in Soil		
Our Reference:	UNITS	98395-118
Your Reference	-----	QA07
Depth	-----	-
Date Sampled		30/09/2013
Type of sample		Soil
Date extracted	-	04/10/2013
Date analysed	-	08/10/2013
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100
Surrogate o-Terphenyl	%	93

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-6 HA03 0.2-0.4 26/09/2013 Soil	98395-7 HA04 0.0-0.2 26/09/2013 Soil	98395-10 HA60 0.0-0.1 26/09/2013 Soil	98395-34 HA18 0.0-0.2 27/09/2013 Soil	98395-48 HA24 0.0-0.2 27/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	95	100	95	101	109

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-56 BP01 0.0-0.2 26/09/2013 Soil	98395-58 BP02 0.0-0.3 27/09/2013 Soil	98395-61 BP04 0.0-0.1 27/09/2013 Soil	98395-105 HA42 0.0-0.1 30/09/2013 Soil	98395-109 HA46 0.0-0.1 30/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	99	99	99	95	98

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-111 HA48 0.0-0.1 30/09/2013 Soil	98395-112 HA49 0.0-0.1 30/09/2013 Soil	98395-114 HA51 0.0-0.1 30/09/2013 Soil	98395-117 HA54 0.0-0.1 30/09/2013 Soil	98395-118 QA07 - 30/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ NEPM B1	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	mg/kg	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	102	95	99	100	101

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98395-1	98395-6	98395-10	98395-12	98395-17
Your Reference	-----	HA01	HA03	HA60	HA07	HA09
Depth	-----	0.0-0.2	0.2-0.4	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		26/09/2013	26/09/2013	26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	107	107	103	103

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98395-32	98395-34	98395-41	98395-46	98395-48
Your Reference	-----	HA17	HA18	HA21	HA23	HA24
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.1	0.0-0.2	0.0-0.2
Date Sampled		27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	110	109	110	107

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98395-58	98395-61	98395-65	98395-69	98395-71
Your Reference	-----	BP02	BP04	SS-01	SS-04	SS-05
Depth	-----	0.0-0.3	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		27/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	108	107	110	109

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98395-75	98395-78	98395-79	98395-82	98395-94
Your Reference	-----	SS-09	SS-10	SS-11	SS-13	HA31
Depth	-----	0.0-0.1	0.2-0.3	0.0-0.1	0.2-0.3	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	105	108	106	104

Organochlorine Pesticides in soil						
Our Reference:	UNITS	98395-97	98395-105	98395-106	98395-109	98395-111
Your Reference	-----	HA34	HA42	HA43	HA46	HA48
Depth	-----	0.0-0.2	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	105	109	105	107

Organochlorine Pesticides in soil			
Our Reference:	UNITS	98395-118	98395-122
Your Reference	-----	QA07	QA05
Depth	-----	-	-
Date Sampled		30/09/2013	30/09/2013
Type of sample		Soil	Soil
Date extracted	-	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013
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	%	107	105

Organophosphorus Pesticides						
Our Reference:	UNITS	98395-1	98395-6	98395-10	98395-12	98395-17
Your Reference	-----	HA01	HA03	HA60	HA07	HA09
Depth	-----	0.0-0.2	0.2-0.4	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		26/09/2013	26/09/2013	26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	107	107	103	103

Organophosphorus Pesticides						
Our Reference:	UNITS	98395-32	98395-34	98395-41	98395-46	98395-48
Your Reference	-----	HA17	HA18	HA21	HA23	HA24
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.1	0.0-0.2	0.0-0.2
Date Sampled		27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	110	109	110	107

Organophosphorus Pesticides						
Our Reference:	UNITS	98395-58	98395-61	98395-65	98395-69	98395-71
Your Reference	-----	BP02	BP04	SS-01	SS-04	SS-05
Depth	-----	0.0-0.3	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		27/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	106	108	107	104	109

Organophosphorus Pesticides						
Our Reference:	UNITS	98395-75	98395-78	98395-79	98395-82	98395-94
Your Reference	-----	SS-09	SS-10	SS-11	SS-13	HA31
Depth	-----	0.0-0.1	0.2-0.3	0.0-0.1	0.2-0.3	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	105	108	106	104

Organophosphorus Pesticides						
Our Reference:	UNITS	98395-97	98395-105	98395-106	98395-109	98395-111
Your Reference	-----	HA34	HA42	HA43	HA46	HA48
Depth	-----	0.0-0.2	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	105	109	105	107

Organophosphorus Pesticides			
Our Reference:	UNITS	98395-118	98395-122
Your Reference	-----	QA07	QA05
Depth	-----	-	-
Date Sampled		30/09/2013	30/09/2013
Type of sample		Soil	Soil
Date extracted	-	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013
Diazinon	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Surrogate TCMX	%	107	105

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-6 HA03 0.2-0.4 26/09/2013 Soil	98395-34 HA18 0.0-0.2 27/09/2013 Soil	98395-58 BP02 0.0-0.3 27/09/2013 Soil	98395-61 BP04 0.0-0.1 27/09/2013 Soil	98395-103 HA40 0.0-0.1 30/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	107	110	106	108	105

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-105 HA42 0.0-0.1 30/09/2013 Soil	98395-109 HA46 0.0-0.1 30/09/2013 Soil	98395-111 HA48 0.0-0.1 30/09/2013 Soil	98395-118 QA07 - 30/09/2013 Soil
Date extracted	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	105	105	107	107

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-1	98395-6	98395-10	98395-12	98395-17
Your Reference	-----	HA01	HA03	HA60	HA07	HA09
Depth	-----	0.0-0.2	0.2-0.4	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		26/09/2013	26/09/2013	26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	5	<4	4	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	0.4	<0.4
Chromium	mg/kg	21	8	26	24	21
Copper	mg/kg	32	9	45	35	22
Lead	mg/kg	22	12	21	46	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	5	23	12	11
Zinc	mg/kg	51	12	90	69	43
Iron	mg/kg	[NA]	12,000	[NA]	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-32	98395-34	98395-41	98395-43	98395-46
Your Reference	-----	HA17	HA18	HA21	HA21	HA23
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.1	0.5-0.6	0.0-0.2
Date Sampled		27/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	5	5	6	6	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	20	17	11	18
Copper	mg/kg	25	23	25	16	36
Lead	mg/kg	15	20	17	11	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	16	10	9	6	17
Zinc	mg/kg	53	43	82	27	64
Iron	mg/kg	[NA]	44,000	[NA]	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-48	98395-49	98395-56	98395-58	98395-61
Your Reference	-----	HA24	QA04	BP01	BP02	BP04
Depth	-----	0.0-0.2	-	0.0-0.2	0.0-0.3	0.0-0.1
Date Sampled		27/09/2013	27/09/2013	26/09/2013	27/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	6	5	5	5	<4
Cadmium	mg/kg	0.6	0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	23	19	25	6
Copper	mg/kg	19	26	18	28	5
Lead	mg/kg	30	28	19	42	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	13	13	7	11	4
Zinc	mg/kg	77	49	39	110	34

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-65	98395-69	98395-71	98395-75	98395-78
Your Reference	-----	SS-01	SS-04	SS-05	SS-09	SS-10
Depth	-----	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.2-0.3
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	<4	7	6	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	21	25	17	16
Copper	mg/kg	21	28	27	28	23
Lead	mg/kg	23	35	21	22	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	15	18	13	8
Zinc	mg/kg	110	590	110	360	32

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-82	98395-83	98395-87	98395-89	98395-91
Your Reference	-----	SS-13	SS-14	HA25	HA27	HA28
Depth	-----	0.2-0.3	0.0-0.1	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	5	7	<4	4	6
Cadmium	mg/kg	<0.4	0.4	<0.4	0.4	<0.4
Chromium	mg/kg	18	19	6	34	22
Copper	mg/kg	31	28	17	21	23
Lead	mg/kg	20	23	5	16	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	13	5	20	15
Zinc	mg/kg	42	57	22	55	48

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-94	98395-97	98395-99	98395-100	98395-102
Your Reference	-----	HA31	HA34	HA36	HA37	HA39
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	<4	5	4	7	7
Cadmium	mg/kg	<0.4	<0.4	0.4	0.5	<0.4
Chromium	mg/kg	7	21	68	28	28
Copper	mg/kg	16	22	28	29	15
Lead	mg/kg	3	18	14	27	32
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	43	11	60	19	9
Zinc	mg/kg	27	41	60	110	34

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-105	98395-106	98395-109	98395-111	98395-112
Your Reference	-----	HA42	HA43	HA46	HA48	HA49
Depth	-----	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	8	8	<4	7	6
Cadmium	mg/kg	0.4	0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	26	23	16	21	21
Copper	mg/kg	19	25	23	17	26
Lead	mg/kg	25	27	17	22	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	13	10	9	11
Zinc	mg/kg	39	51	45	31	47
Iron	mg/kg	50,000	[NA]	33,000	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference:	UNITS	98395-114	98395-117	98395-118	98395-122	98395-123
Your Reference	-----	HA51	HA54	QA07	QA05	QA06
Depth	-----	0.0-0.1	0.0-0.1	-	-	-
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	04/10/2013	04/10/2013	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013	08/10/2013	08/10/2013
Arsenic	mg/kg	5	7	<4	<4	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	0.6
Chromium	mg/kg	11	23	15	6	22
Copper	mg/kg	8	23	28	13	38
Lead	mg/kg	22	23	17	3	26
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	11	12	37	14
Zinc	mg/kg	22	50	55	24	67
Iron	mg/kg	12,000	40,000	40,000	[NA]	[NA]

Acid Extractable metals in soil		
Our Reference:	UNITS	98395-128
Your Reference	-----	HA03 -
Depth	-----	TRIPLICATE
Date Sampled		0.2-0.4
Type of sample		26/09/2013
		Soil
Date digested	-	04/10/2013
Date analysed	-	08/10/2013
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	10
Copper	mg/kg	9
Lead	mg/kg	14
Mercury	mg/kg	<0.1
Nickel	mg/kg	7
Zinc	mg/kg	17
Iron	mg/kg	15,000

Miscellaneous Inorg - soil						
Our Reference:	UNITS	98395-6	98395-34	98395-105	98395-109	98395-114
Your Reference	-----	HA03	HA18	HA42	HA46	HA51
Depth	-----	0.2-0.4	0.0-0.2	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		26/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
pH 1:5 soil:water	pH Units	7.2	6.1	5.7	5.6	5.6
Organic Matter, Walkely Black	mg/kg	8,000	14,000	32,000	16,000	12,000

Miscellaneous Inorg - soil			
Our Reference:	UNITS	98395-117	98395-118
Your Reference	-----	HA54	QA07
Depth	-----	0.0-0.1	-
Date Sampled		30/09/2013	30/09/2013
Type of sample		Soil	Soil
Date prepared	-	05/10/2013	05/10/2013
Date analysed	-	05/10/2013	05/10/2013
pH 1:5 soil:water	pH Units	6.3	5.6
Organic Matter, Walkely Black	mg/kg	19,000	20,000

ESP/CEC						
Our Reference:	UNITS	98395-6	98395-34	98395-105	98395-109	98395-114
Your Reference	-----	HA03	HA18	HA42	HA46	HA51
Depth	-----	0.2-0.4	0.0-0.2	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		26/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Exchangeable Ca	meq/100g	6.1	6.2	2.1	1.5	1.4
Exchangeable K	meq/100g	<0.1	0.5	0.3	0.3	0.1
Exchangeable Mg	meq/100g	2.1	9.6	5.0	5.1	2.0
Exchangeable Na	meq/100g	<0.1	0.34	0.18	0.28	0.24
Cation Exchange Capacity	meq/100g	8.3	17	7.6	7.2	3.7

ESP/CEC			
Our Reference:	UNITS	98395-117	98395-118
Your Reference	-----	HA54	QA07
Depth	-----	0.0-0.1	-
Date Sampled		30/09/2013	30/09/2013
Type of sample		Soil	Soil
Exchangeable Ca	meq/100g	4.1	3.2
Exchangeable K	meq/100g	1.8	0.6
Exchangeable Mg	meq/100g	6.6	9.3
Exchangeable Na	meq/100g	0.85	0.42
Cation Exchange Capacity	meq/100g	13	14

Moisture						
Our Reference:	UNITS	98395-1	98395-6	98395-7	98395-10	98395-12
Your Reference	-----	HA01	HA03	HA04	HA60	HA07
Depth	-----	0.0-0.2	0.2-0.4	0.0-0.2	0.0-0.1	0.0-0.1
Date Sampled		26/09/2013	26/09/2013	26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	16	16	20	17	21

Moisture						
Our Reference:	UNITS	98395-17	98395-32	98395-34	98395-41	98395-43
Your Reference	-----	HA09	HA17	HA18	HA21	HA21
Depth	-----	0.3-0.4	0.0-0.2	0.0-0.2	0.0-0.1	0.5-0.6
Date Sampled		26/09/2013	27/09/2013	27/09/2013	27/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	13	12	11	18	15

Moisture						
Our Reference:	UNITS	98395-46	98395-48	98395-49	98395-56	98395-58
Your Reference	-----	HA23	HA24	QA04	BP01	BP02
Depth	-----	0.0-0.2	0.0-0.2	-	0.0-0.2	0.0-0.3
Date Sampled		27/09/2013	27/09/2013	27/09/2013	26/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	13	18	15	9.5	16

Moisture						
Our Reference:	UNITS	98395-61	98395-65	98395-69	98395-71	98395-75
Your Reference	-----	BP04	SS-01	SS-04	SS-05	SS-09
Depth	-----	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		27/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	2.5	19	10	12	25

Moisture						
Our Reference:	UNITS	98395-78	98395-79	98395-82	98395-83	98395-87
Your Reference	-----	SS-10	SS-11	SS-13	SS-14	HA25
Depth	-----	0.2-0.3	0.0-0.1	0.2-0.3	0.0-0.1	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	12	13	13	9.9	4.4

Moisture						
Our Reference:	UNITS	98395-89	98395-91	98395-94	98395-97	98395-99
Your Reference	-----	HA27	HA28	HA31	HA34	HA36
Depth	-----	0.0-0.1	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	10	9.3	3.1	8.4	7.2

Moisture						
Our Reference:	UNITS	98395-100	98395-102	98395-103	98395-105	98395-106
Your Reference	-----	HA37	HA39	HA40	HA42	HA43
Depth	-----	0.0-0.2	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	7.8	6.3	6.8	10	11

Moisture						
Our Reference:	UNITS	98395-109	98395-111	98395-112	98395-114	98395-117
Your Reference	-----	HA46	HA48	HA49	HA51	HA54
Depth	-----	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1	0.0-0.1
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013	8/10/2013	8/10/2013
Moisture	%	13	8.1	16	10	12

Moisture				
Our Reference:	UNITS	98395-118	98395-122	98395-123
Your Reference	-----	QA07	QA05	QA06
Depth	-----	-	-	-
Date Sampled		30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil
Date prepared	-	4/10/2013	4/10/2013	4/10/2013
Date analysed	-	8/10/2013	8/10/2013	8/10/2013
Moisture	%	13	2.9	11

Asbestos ID - soils WA						
Our Reference:	UNITS	98395-1	98395-16	98395-17	98395-18	98395-32
Your Reference	-----	HA01	HA09	HA09	HA10	HA17
Depth	-----	0.0-0.2	0.0-0.2	0.3-0.4	0.0-0.2	0.0-0.2
Date Sampled		26/09/2013	26/09/2013	26/09/2013	26/09/2013	27/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	401.93g	518.42g	460.55g	482.15g	588.42g
Sample Description	-	Brown coarse- grained soil	Red-brown coarse- grained soil	Red-brown fine-grained clayey soil	Brown coarse- grained soil & rocks	Beige-brown coarse- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA						
Our Reference:	UNITS	98395-34	98395-46	98395-48	98395-56	98395-57
Your Reference	-----	HA18	HA23	HA24	BP01	BP01
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.3-0.4
Date Sampled		27/09/2013	27/09/2013	27/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	558.59g	516.74g	488.70g	421.37g	391.89g
Sample Description	-	Brown coarse- grained soil & rocks	Brown coarse- grained soil & rocks	Brown coarse- grained soil	Brown coarse- grained soil	Red-brown coarse- grained 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	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA						
Our Reference:	UNITS	98395-58	98395-61	98395-87	98395-89	98395-91
Your Reference	-----	BP02	BP04	HA25	HA27	HA28
Depth	-----	0.0-0.3	0.0-0.1	0.0-0.2	0.0-0.1	0.0-0.2
Date Sampled		27/09/2013	27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	519.70g	545.97g	607.41g	454.98g	515.89g
Sample Description	-	Brown coarse- grained soil	Brown fine- grained soil	Brown fine- grained soil	Brown coarse- grained soil & rocks	Brown coarse- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA						
Our Reference:	UNITS	98395-94	98395-96	98395-97	98395-99	98395-100
Your Reference	-----	HA31	HA33	HA34	HA36	HA37
Depth	-----	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2	0.0-0.2
Date Sampled		30/09/2013	30/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	633.73g	462.56g	494.68g	692.58g	506.07g
Sample Description	-	Brown fine- grained soil	Brown coarse- grained soil	Brown coarse- grained soil & rocks	Brown coarse- grained soil & rocks	Brown fine- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-102 HA39 0.0-0.1 30/09/2013 Soil	98395-103 HA40 0.0-0.1 30/09/2013 Soil	98395-105 HA42 0.0-0.1 30/09/2013 Soil	98395-106 HA43 0.0-0.1 30/09/2013 Soil	98395-107 HA44 0.0-0.1 30/09/2013 Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	564.19g	540.59g	534.96g	566.31g	562.31g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained 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	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-109 HA46 0.0-0.1 30/09/2013 Soil	98395-111 HA48 0.0-0.1 30/09/2013 Soil	98395-112 HA49 0.0-0.1 30/09/2013 Soil	98395-114 HA51 0.0-0.1 30/09/2013 Soil	98395-115 HA52 0.0-0.1 30/09/2013 Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	501.44g	491.18g	445.03g	469.92g	532.35g
Sample Description	-	Red-brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil	Brown fine-grained soil	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils WA			
Our Reference:	UNITS	98395-117	98395-118
Your Reference	-----	HA54	QA07
Depth	-----	0.0-0.1	-
Date Sampled		30/09/2013	30/09/2013
Type of sample		Soil	Soil
Date analysed	-	8-11 & 14/10/2013	8-11 & 14/10/2013
Sample mass tested	g	525.23g	572.55g
Sample Description	-	Brown coarse- grained soil & rocks	Red-brown coarse- grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	98395-5	98395-6	98395-9	98395-43	98395-83
Your Reference:	-----	HA03	HA03	HA05	HA21	SS-14
Depth	-----	0.0-0.1	0.2-0.4	0.0-0.3	0.5-0.6	0.0-0.1
Date Sampled		26/09/2013	26/09/2013	26/09/2013	27/09/2013	30/09/2013
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/10/2013	15/10/2013	15/10/2013	15/10/2013	15/10/2013
Sample mass tested	g	Approx 50g	Approx 50g	Approx 50g	Approx 50g	Approx 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Trazine Herbicides in Soil				
Our Reference:	UNITS	98395-10	98395-12	98395-17
Your Reference	-----	HA60	HA07	HA09
Depth	-----	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil
Atrazine	mg/kg	<0.1	<0.1	<0.1
Hexazinone	mg/kg	<0.1	<0.1	<0.1
Metribuzine	mg/kg	<0.1	<0.1	<0.1
Prometryne	mg/kg	<0.1	<0.1	<0.1
Simazine	mg/kg	<0.1	<0.1	<0.1

Phenoxy Acid Herbicides in Soil				
Our Reference:	UNITS	98395-10	98395-12	98395-17
Your Reference	-----	HA60	HA07	HA09
Depth	-----	0.0-0.1	0.0-0.1	0.3-0.4
Date Sampled		26/09/2013	26/09/2013	26/09/2013
Type of sample		Soil	Soil	Soil
Date extracted	-	11/10/2013	11/10/2013	11/10/2013
Date analysed	-	11/10/2013	11/10/2013	11/10/2013
Dicamba	mg/kg	<0.1	<0.1	<0.1
MCPA	mg/kg	<0.1	<0.1	<0.1
Dichlorprop	mg/kg	<0.1	<0.1	<0.1
2,4-D	mg/kg	<0.1	<0.1	<0.1
2,4,5-T	mg/kg	<0.1	<0.1	<0.1
2,4,5-TP	mg/kg	<0.1	<0.1	<0.1
2,4-DB	mg/kg	<0.1	<0.1	<0.1
MCPP	mg/kg	<0.1	<0.1	<0.1
Triclopyr	mg/kg	<0.1	<0.1	<0.1
Picloram	mg/kg	<0.1	<0.1	<0.1
Clopyralid	mg/kg	<0.1	<0.1	<0.1
Fluroxypyr	mg/kg	<0.1	<0.1	<0.1

VOCs in water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-54 Rinsate 1 - 26/09/2013 water	98395-55 Rinsate 2 - 27/09/2013 water	98395-121 R-03 - 30/09/2013 water
Date extracted	-	05/10/2013	05/10/2013	05/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1

VOCs in water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-54 Rinsate 1 - 26/09/2013 water	98395-55 Rinsate 2 - 27/09/2013 water	98395-121 R-03 - 30/09/2013 water
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	122	124	128
Surrogate toluene-d8	%	93	91	91
Surrogate 4-BFB	%	84	84	84

vTRH(C6-C10)/BTEXN in Water	UNITS	98395-50	98395-51	98395-52	98395-53	98395-54
Our Reference:	-----	TS	TB	TS	TB	Rinsate 1
Your Reference	-----	-	-	-	-	-
Depth						
Date Sampled		26/09/2013	26/09/2013	27/09/2013	27/09/2013	26/09/2013
Type of sample		Water	water	water	water	water
Date extracted	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013	05/10/2013
TRHC ₆ - C ₉	µg/L	[NA]	<10	[NA]	<10	<10
TRHC ₆ - C ₁₀	µg/L	[NA]	<10	[NA]	<10	<10
TRHC ₆ - C ₁₀ less BTEX (F1)	µg/L	[NA]	<10	[NA]	<10	<10
Benzene	µg/L	109%	<1	107%	<1	<1
Toluene	µg/L	111%	<1	109%	<1	<1
Ethylbenzene	µg/L	113%	<1	111%	<1	<1
m+p-xylene	µg/L	115%	<2	113%	<2	<2
o-xylene	µg/L	116%	<1	114%	<1	<1
Naphthalene	µg/L	[NA]	<1	[NA]	<1	<1
Surrogate Dibromofluoromethane	%	92	104	102	104	122
Surrogate toluene-d8	%	95	94	95	94	93
Surrogate 4-BFB	%	94	93	94	94	84

vTRH(C6-C10)/BTEXN in Water	UNITS	98395-55	98395-119	98395-120	98395-121
Our Reference:	-----	Rinsate 2	TS	TB	R-03
Your Reference	-----	-	-	-	-
Depth					
Date Sampled		27/09/2013	30/09/2013	30/09/2013	30/09/2013
Type of sample		water	water	water	water
Date extracted	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013
Date analysed	-	05/10/2013	05/10/2013	05/10/2013	05/10/2013
TRHC ₆ - C ₉	µg/L	<10	[NA]	<10	<10
TRHC ₆ - C ₁₀	µg/L	<10	[NA]	<10	<10
TRHC ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	[NA]	<10	<10
Benzene	µg/L	<1	112%	<1	<1
Toluene	µg/L	<1	115%	<1	<1
Ethylbenzene	µg/L	<1	116%	<1	<1
m+p-xylene	µg/L	<2	118%	<2	<2
o-xylene	µg/L	<1	119%	<1	<1
Naphthalene	µg/L	<1	[NA]	<1	<1
Surrogate Dibromofluoromethane	%	124	104	106	128
Surrogate toluene-d8	%	91	95	93	91
Surrogate 4-BFB	%	84	96	93	84

svTRH (C10-C40) in Water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-54 Rinsate 1 - 26/09/2013 water	98395-55 Rinsate 2 - 27/09/2013 water	98395-121 R-03 - 30/09/2013 water
Date extracted	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	08/10/2013	08/10/2013	08/10/2013
TRHC ₁₀ - C ₁₄	µg/L	<50	<50	<50
TRHC ₁₅ - C ₂₈	µg/L	<100	<100	<100
TRHC ₂₉ - C ₃₆	µg/L	<100	<100	<100
TRH>C ₁₀ - C ₁₆	µg/L	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50	<50	<50
TRH>C ₁₆ - C ₃₄	µg/L	<100	<100	<100
TRH>C ₃₄ - C ₄₀	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	132	127	120

PAHs in Water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-54 Rinsate 1 - 26/09/2013 water	98395-55 Rinsate 2 - 27/09/2013 water	98395-121 R-03 - 30/09/2013 water
Date extracted	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
Naphthalene	µg/L	<1	<1	<1
Acenaphthylene	µg/L	<1	<1	<1
Acenaphthene	µg/L	<1	<1	<1
Fluorene	µg/L	<1	<1	<1
Phenanthrene	µg/L	<1	<1	<1
Anthracene	µg/L	<1	<1	<1
Fluoranthene	µg/L	<1	<1	<1
Pyrene	µg/L	<1	<1	<1
Benzo(a)anthracene	µg/L	<1	<1	<1
Chrysene	µg/L	<1	<1	<1
Benzo(b+k)fluoranthene	µg/L	<2	<2	<2
Benzo(a)pyrene	µg/L	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	122	124	112

OCP in water Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	98395-54 Rinsate 1 - 26/09/2013 water	98395-55 Rinsate 2 - 27/09/2013 water	98395-121 R-03 - 30/09/2013 water
Date extracted	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
HCB	µg/L	<0.2	<0.2	<0.2
alpha-BHC	µg/L	<0.2	<0.2	<0.2
gamma-BHC	µg/L	<0.2	<0.2	<0.2
beta-BHC	µg/L	<0.2	<0.2	<0.2
Heptachlor	µg/L	<0.2	<0.2	<0.2
delta-BHC	µg/L	<0.2	<0.2	<0.2
Aldrin	µg/L	<0.2	<0.2	<0.2
Heptachlor Epoxide	µg/L	<0.2	<0.2	<0.2
gamma-Chlordane	µg/L	<0.2	<0.2	<0.2
alpha-Chlordane	µg/L	<0.2	<0.2	<0.2
Endosulfan I	µg/L	<0.2	<0.2	<0.2
pp-DDE	µg/L	<0.2	<0.2	<0.2
Dieldrin	µg/L	<0.2	<0.2	<0.2
Endrin	µg/L	<0.2	<0.2	<0.2
pp-DDD	µg/L	<0.2	<0.2	<0.2
Endosulfan II	µg/L	<0.2	<0.2	<0.2
pp-DDT	µg/L	<0.2	<0.2	<0.2
Endrin Aldehyde	µg/L	<0.2	<0.2	<0.2
Endosulfan Sulphate	µg/L	<0.2	<0.2	<0.2
Methoxychlor	µg/L	<0.2	<0.2	<0.2
Surrogate TCMX	%	130	129	125

OP Pesticides in water				
Our Reference:	UNITS	98395-54	98395-55	98395-121
Your Reference	-----	Rinsate 1	Rinsate 2	R-03
Depth	-----	-	-	-
Date Sampled		26/09/2013	27/09/2013	30/09/2013
Type of sample		water	water	water
Date extracted	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
Diazinon	µg/L	<0.2	<0.2	<0.2
Dimethoate	µg/L	<0.2	<0.2	<0.2
Chlorpyriphos-methyl	µg/L	<0.2	<0.2	<0.2
Ronnel	µg/L	<0.2	<0.2	<0.2
Chlorpyriphos	µg/L	<0.2	<0.2	<0.2
Fenitrothion	µg/L	<0.2	<0.2	<0.2
Bromophos ethyl	µg/L	<0.2	<0.2	<0.2
Ethion	µg/L	<0.2	<0.2	<0.2
Surrogate TCMX	%	130	129	125

PCBs in Water				
Our Reference:	UNITS	98395-54	98395-55	98395-121
Your Reference	-----	Rinsate 1	Rinsate 2	R-03
Depth	-----	-	-	-
Date Sampled		26/09/2013	27/09/2013	30/09/2013
Type of sample		water	water	water
Date extracted	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
Arochlor 1016	µg/L	<2	<2	<2
Arochlor 1221	µg/L	<2	<2	<2
Arochlor 1232	µg/L	<2	<2	<2
Arochlor 1242	µg/L	<2	<2	<2
Arochlor 1248	µg/L	<2	<2	<2
Arochlor 1254	µg/L	<2	<2	<2
Arochlor 1260	µg/L	<2	<2	<2
Surrogate TCLMX	%	130	129	125

Metals in Water - Dissolved				
Our Reference:	UNITS	98395-54	98395-55	98395-121
Your Reference	-----	Rinsate 1	Rinsate 2	R-03
Depth	-----	-	-	-
Date Sampled		26/09/2013	27/09/2013	30/09/2013
Type of sample		water	water	water
Date digested	-	04/10/2013	04/10/2013	04/10/2013
Date analysed	-	04/10/2013	04/10/2013	04/10/2013
Arsenic - Dissolved	mg/L	<0.05	<0.05	<0.05
Cadmium - Dissolved	mg/L	<0.01	<0.01	<0.01
Chromium - Dissolved	mg/L	<0.01	<0.01	<0.01
Copper - Dissolved	mg/L	<0.01	<0.01	<0.01
Lead - Dissolved	mg/L	<0.03	<0.03	<0.03
Mercury - Dissolved	mg/L	<0.0005	<0.0005	<0.0005
Nickel - Dissolved	mg/L	<0.02	<0.02	<0.02
Zinc - Dissolved	mg/L	<0.02	<0.02	<0.02

Trazine Herbicides in Water		
Our Reference:	UNITS	98395-121
Your Reference	-----	R-03
Depth	-----	-
Date Sampled		30/09/2013
Type of sample		water
Date extracted	-	09/10/2013
Date analysed	-	09/10/2013
Atrazine	µg/L	<0.1
Hexazinone	µg/L	<0.1
Metribuzine	µg/L	<0.1
Prometryn	µg/L	<0.1
Simazine	µg/L	<0.1

Phenoxy Acid Herbicides in Water		
Our Reference:	UNITS	98395-121
Your Reference	-----	R-03
Depth	-----	-
Date Sampled		30/09/2013
Type of sample		water
Date extracted	-	09/10/2013
Date analysed	-	09/10/2013
Dicamba	µg/L	<1
MCPA	µg/L	<1
Dichlorprop	µg/L	<1
2,4-D	µg/L	<1
2,4,5-T	µg/L	<1
2,4,5-TP	µg/L	<1
2,4-DB	µg/L	<1
MCP	µg/L	<1
Triclopyr	µg/L	<1
Picloram	µg/L	<1
Clopyralid	µg/L	<1
Fluroxypyr	µg/L	<1

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)-BTEX 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. Note Naphthalene is determined from the VOC analysis.
Org-012 subset	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.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	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-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-036	Total Organic Matter - A titrimetric method that measures the oxidisable organic content of soils. Based upon Rayment and Lyons 2011 where TOM is estimated as = TOC * 1.724.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soil based on Rayment and Lyons 2011.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.
ASB-003	Asbestos ID - Minimum 500mL soil sample was analysed as recommended by "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg as per AS4964-2004.
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.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
Org-013	Water samples are analysed directly by purge and trap GC-MS.

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	98395-118	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			05/10/2013	98395-118	05/10/2013 05/10/2013	LCS-5	05/10/2013
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	93%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	101%
2,2-dichloropropane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	87%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	102%
1,1-dichloropropene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	98395-118	<0.2 <0.2	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	87%
bromodichloromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	97%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	98395-118	<0.5 <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	103%
1,2-dibromoethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	98395-118	<1 <1	LCS-5	100%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	98395-118	<2 <2	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base Duplicate %RPD		
isopropylbenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	98395-118	<1 <1	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	104	98395-118	119 119 RPD: 0	LCS-5	104%
Surrogate aaa-Trifluorotoluene	%		Org-014	103	98395-118	110 113 RPD: 3	LCS-5	105%
Surrogate Toluene-d8	%		Org-014	110	98395-118	107 106 RPD: 1	LCS-5	101%
Surrogate 4-Bromofluorobenzene	%		Org-014	77	98395-118	77 75 RPD: 3	LCS-5	79%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-6	04/10/2013
Date analysed	-			05/10/2013	98395-6	05/10/2013 05/10/2013	LCS-6	05/10/2013
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	98395-6	<25 <25	LCS-6	137%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	98395-6	<25 <25	LCS-6	137%
Benzene	mg/kg	0.2	Org-016	<0.2	98395-6	<0.2 <0.2	LCS-6	130%
Toluene	mg/kg	0.5	Org-016	<0.5	98395-6	<0.5 <0.5	LCS-6	140%
Ethylbenzene	mg/kg	1	Org-016	<1	98395-6	<1 <1	LCS-6	136%
m+p-xylene	mg/kg	2	Org-016	<2	98395-6	<2 <2	LCS-6	140%
o-Xylene	mg/kg	1	Org-016	<1	98395-6	<1 <1	LCS-6	137%
naphthalene	mg/kg	1	Org-014	<1	98395-6	<1 <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	128	98395-6	121 115 RPD: 5	LCS-6	129%
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	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			08/10/2013	98395-6	08/10/2013 08/10/2013	LCS-5	08/10/2013
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	98395-6	<50 <50	LCS-5	94%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	98395-6	<100 <100	LCS-5	111%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	98395-6	<100 <100	LCS-5	91%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	98395-6	<50 <50	LCS-5	94%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	98395-6	<100 <100	LCS-5	111%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	98395-6	<100 <100	LCS-5	91%
Surrogate o-Terphenyl	%		Org-003	92	98395-6	94 96 RPD: 2	LCS-5	113%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	111%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	109%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	98%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	92%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	94%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	LCS-5	95%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	98395-6	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	98395-6	<0.05 <0.05	LCS-5	96%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	99	98395-6	95 91 RPD: 4	LCS-5	97%
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	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
HCB	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	97%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	97%
Heptachlor	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	112%
delta-BHC	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	101%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	95%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	109%
Dieldrin	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	98%
Endrin	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	93%
pp-DDD	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	109%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	LCS-5	116%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	100	98395-6	107 105 RPD: 2	LCS-5	105%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Diazinon	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	LCS-5	87%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	LCS-5	127%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	98395-6	<0.1 <0.1	LCS-5	103%
Surrogate TCMX	%		Org-008	100	98395-6	107 105 RPD: 2	LCS-5	102%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Date analysed	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-5	04/10/2013
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	LCS-5	97%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	98395-6	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	100	98395-6	107 105 RPD: 2	LCS-5	88%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			04/10/2013	98395-6	04/10/2013 04/10/2013	LCS-1	04/10/2013
Date analysed	-			08/10/2013	98395-6	08/10/2013 08/10/2013	LCS-1	04/10/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	98395-6	<4 <4	LCS-1	100%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	98395-6	<0.4 <0.4	LCS-1	102%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	8 12 RPD: 40	LCS-1	101%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	9 9 RPD: 0	LCS-1	104%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	12 15 RPD: 22	LCS-1	100%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	98395-6	<0.1 <0.1	LCS-1	84%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	5 6 RPD: 18	LCS-1	102%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	12 16 RPD: 29	LCS-1	101%
Iron	mg/kg	1	Metals-020 ICP-AES	<1	98395-6	12000 22000 RPD: 59	LCS-1	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Miscellaneous Inorg - soil						Base II Duplicate II %RPD		
Date prepared	-			[NT]	98395-34	05/10/2013 05/10/2013	LCS-1	08/10/2013
Date analysed	-			[NT]	98395-34	05/10/2013 05/10/2013	LCS-1	08/10/2013
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	98395-34	6.1 [N/T]	LCS-1	100%
Organic Matter, Walkely Black	mg/kg	1000	Inorg-036	<1000	98395-34	14000 14000 RPD: 0	LCS-1	97%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
ESP/CEC						Base II Duplicate II %RPD		
Exchangeable Ca	meq/100 g	0.1	Metals-009	<0.1	98395-6	6.1 6.5 RPD: 6	LCS-1	100%
Exchangeable K	meq/100 g	0.1	Metals-009	<0.1	98395-6	<0.1 0.1	LCS-1	94%
Exchangeable Mg	meq/100 g	0.1	Metals-009	<0.1	98395-6	2.1 2.2 RPD: 5	LCS-1	98%
Exchangeable Na	meq/100 g	0.1	Metals-009	<0.1	98395-6	<0.1 <0.1	LCS-1	108%
Cation Exchange Capacity	meq/100 g	1	Metals-009	<1.0	98395-6	8.3 8.9 RPD: 7	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Moisture								
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank				
Asbestos ID - soils WA								
Date analysed	-			[NT]				
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Asbestos ID - soils						Base II Duplicate II %RPD		
Date analysed	-			[NT]	[NT]	[NT]	[NR]	[NR]
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Trazine Herbicides in Soil						Base II Duplicate II %RPD		
Atrazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	83%
Hexazinone	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Metribuzine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Prometryne	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Simazine	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Phenoxy Acid Herbicides in Soil						Base II Duplicate II %RPD		
Date extracted	-			11/10/2013	[NT]	[NT]	LCS-1	11/10/2013
Date analysed	-			11/10/2013	[NT]	[NT]	LCS-1	11/10/2013
Dicamba	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	113%
MCPA	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	108%
Dichlorprop	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	110%
2,4-D	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	110%
2,4,5-T	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	109%
2,4,5-TP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	106%
2,4-DB	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	105%
MOPP	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	105%
Triclopyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	105%
Picloram	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Clopyralid	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Fluroxypyr	mg/kg	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-1	102%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
Date extracted	-			05/10/2013	[NT]	[NT]	LCS-W1	05/10/2013
Date analysed	-			05/10/2013	[NT]	[NT]	LCS-W1	05/10/2013
Dichlorodifluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	106%
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chloroform	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	108%
2,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	108%
1,1,1-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	106%
1,1-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Carbon tetrachloride	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromomethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	106%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
Bromodichloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	108%
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	106%
1,2-dibromoethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tetrachloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	101%
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromoform	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	Org-013	<2	[NT]	[NT]	[NR]	[NR]
Styrene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
o-xylene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Isopropylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tert-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Sec-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate	%		Org-013	113	[NT]	[NT]	LCS-W1	107%
Dibromofluoromethane								
Surrogate toluene-d8	%		Org-013	102	[NT]	[NT]	LCS-W1	102%
Surrogate 4-BFB	%		Org-013	91	[NT]	[NT]	LCS-W1	101%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Water						Base II Duplicate II %RPD		
Date extracted	-			05/10/2013	[NT]	[NT]	LCS-W1	05/10/2013
Date analysed	-			05/10/2013	[NT]	[NT]	LCS-W1	05/10/2013
TRHC ₆ - C ₉	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	101%
TRHC ₆ - C ₁₀	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	101%
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	101%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	101%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	101%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	101%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	101%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	113	[NT]	[NT]	LCS-W1	103%
Surrogate toluene-d8	%		Org-016	102	[NT]	[NT]	LCS-W1	104%
Surrogate 4-BFB	%		Org-016	91	[NT]	[NT]	LCS-W1	104%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Water						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			08/10/2013	[NT]	[NT]	LCS-W1	08/10/2013
TRHC ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	76%
TRHC ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	93%
TRHC ₂₉ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	103%
TRH>C ₁₀ - C ₁₆	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	76%
TRH>C ₁₆ - C ₃₄	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	93%
TRH>C ₃₄ - C ₄₀	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	103%
Surrogate o-Terphenyl	%		Org-003	115	[NT]	[NT]	LCS-W1	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Water						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Naphthalene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	100%
Acenaphthylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	103%
Phenanthrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	89%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Water						Base II Duplicate II %RPD		
Anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	85%
Pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	107%
Benzo(a)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	80%
Benzo(b+k)fluoranthene	µg/L	2	Org-012 subset	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	LCS-W1	75%
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	Org-012 subset	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	100	[NT]	[NT]	LCS-W1	104%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OCP in water						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
HCB	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-BHC	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	87%
gamma-BHC	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
beta-BHC	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	82%
Heptachlor	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	86%
delta-BHC	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
Aldrin	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	87%
Heptachlor Epoxide	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	87%
gamma-Chlordane	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-Chlordane	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan I	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
pp-DDE	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	82%
Dieldrin	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	90%
Endrin	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	82%
pp-DDD	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	87%
Endosulfan II	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
pp-DDT	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	LCS-W1	92%
Methoxychlor	µg/L	0.2	Org-005	<0.2	[NT]	[NT]	[NR]	[NR]

Client Reference: 43002, Eastern Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OCP in water						Base II Duplicate II %RPD		
Surrogate TCMX	%		Org-005	120	[NT]	[NT]	LCS-W1	110%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OP Pesticides in water						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Diazinon	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	[NR]	[NR]
Dimethoate	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	[NR]	[NR]
Ronnel	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	LCS-W1	73%
Fenitrothion	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	LCS-W1	119%
Bromophos ethyl	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	[NR]	[NR]
Ethion	µg/L	0.2	Org-008	<0.2	[NT]	[NT]	LCS-W1	92%
Surrogate TCMX	%		Org-008	120	[NT]	[NT]	LCS-W1	113%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Water						Base II Duplicate II %RPD		
Date extracted	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			04/10/2013	[NT]	[NT]	LCS-W1	04/10/2013
Arochlor 1016	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	µg/L	2	Org-006	<2	[NT]	[NT]	LCS-W1	103%
Arochlor 1260	µg/L	2	Org-006	<2	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	120	[NT]	[NT]	LCS-W1	98%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in Water - Dissolved						Base II Duplicate II %RPD		
Date digested	-			[NT]	[NT]	[NT]	LCS-W1	04/10/2013
Date analysed	-			[NT]	[NT]	[NT]	LCS-W1	04/10/2013
Arsenic - Dissolved	mg/L	0.05	Metals-020 ICP-AES	<0.05	[NT]	[NT]	LCS-W1	99%
Cadmium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	99%
Chromium - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	99%
Copper - Dissolved	mg/L	0.01	Metals-020 ICP-AES	<0.01	[NT]	[NT]	LCS-W1	101%
Lead - Dissolved	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	LCS-W1	99%

Client Reference: 43002, Eastern Creek

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in Water - Dissolved						Base II Duplicate II %RPD		
Mercury - Dissolved	mg/L	0.0005	Metals-021 CV-AAS	<0.0005	[NT]	[NT]	LCS-W1	108%
Nickel - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	103%
Zinc - Dissolved	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	LCS-W1	102%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Trazine Herbicides in Water						Base II Duplicate II %RPD		
Date extracted	-			[NT]	[NT]	[NT]	LCS-W1	09/10/2013
Date analysed	-			[NT]	[NT]	[NT]	LCS-W1	09/10/2013
Atrazine	µg/L	0.1	Ext-020	<0.1	[NT]	[NT]	LCS-W1	101%
Hexazinone	µg/L	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Metribuzine	µg/L	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Prometryn	µg/L	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
Simazine	µg/L	0.1	Ext-020	<0.1	[NT]	[NT]	[NR]	[NR]
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Phenoxy Acid Herbicides in Water						Base II Duplicate II %RPD		
Date extracted	-			[NT]	[NT]	[NT]	LCS-W1	09/10/2013
Date analysed	-			[NT]	[NT]	[NT]	LCS-W1	09/10/2013
Dicamba	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	107%
MCPA	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	102%
Dichlorprop	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	85%
2,4-D	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	94%
2,4,5-T	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	94%
2,4,5-TP	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	97%
2,4-DB	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	92%
MOPP	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	82%
Triclopyr	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	105%
Picloram	µg/L	1	Ext-020	<1	[NT]	[NT]	[NR]	[NR]
Clopyralid	µg/L	1	Ext-020	<1	[NT]	[NT]	[NR]	[NR]
Fluroxypyr	µg/L	1	Ext-020	<1	[NT]	[NT]	LCS-W1	111%
QUALITYCONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#		Duplicate Base + Duplicate + %RPD		Spike Sm#	Spike % Recovery	
Date extracted	-	98395-118		04/10/2013 04/10/2013		98395-34	04/10/2013	
Date analysed	-	98395-118		05/10/2013 05/10/2013		98395-34	05/10/2013	
TRHC ₆ - C ₉	mg/kg	98395-118		<25 <25		98395-34	120%	
TRHC ₆ - C ₁₀	mg/kg	98395-118		<25 <25		98395-34	120%	
Benzene	mg/kg	98395-118		<0.2 <0.2		98395-34	113%	
Toluene	mg/kg	98395-118		<0.5 <0.5		98395-34	123%	
Ethylbenzene	mg/kg	98395-118		<1 <1		98395-34	118%	

Client Reference: 43002, Eastern Creek

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
m+p-xylene	mg/kg	98395-118	<2 <2	98395-34	124%
o-Xylene	mg/kg	98395-118	<1 <1	98395-34	120%
naphthalene	mg/kg	98395-118	<1 <1	[NR]	[NR]
Surrogate aaa- Trifluorotoluene	%	98395-118	118 127 RPD: 7	98395-34	112%
QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-118	08/10/2013 08/10/2013	98395-34	08/10/2013
TRHC ₁₀ - C ₁₄	mg/kg	98395-118	<50 <50	98395-34	90%
TRHC ₁₅ - C ₂₈	mg/kg	98395-118	<100 <100	98395-34	101%
TRHC ₂₉ - C ₃₆	mg/kg	98395-118	<100 <100	98395-34	99%
TRH>C ₁₀ -C ₁₆	mg/kg	98395-118	<50 <50	98395-34	90%
TRH>C ₁₆ -C ₃₄	mg/kg	98395-118	<100 <100	98395-34	101%
TRH>C ₃₄ -C ₄₀	mg/kg	98395-118	<100 <100	98395-34	99%
Surrogate o-Terphenyl	%	98395-118	93 97 RPD: 4	98395-34	100%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Naphthalene	mg/kg	98395-118	<0.1 <0.1	98395-34	111%
Acenaphthylene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	98395-118	<0.1 <0.1	98395-34	107%
Phenanthrene	mg/kg	98395-118	<0.1 <0.1	98395-34	96%
Anthracene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	98395-118	<0.1 <0.1	98395-34	90%
Pyrene	mg/kg	98395-118	<0.1 <0.1	98395-34	92%
Benzo(a)anthracene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	98395-118	<0.1 <0.1	98395-34	92%
Benzo(b+k)fluoranthene	mg/kg	98395-118	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	98395-118	<0.05 <0.05	98395-34	89%
Indeno(1,2,3-c,d)pyrene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	98395-118	101 100 RPD: 1	98395-34	96%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-65	04/10/2013 04/10/2013	LCS-6	04/10/2013
Date analysed	-	98395-65	04/10/2013 04/10/2013	LCS-6	04/10/2013
HCB	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	98395-65	<0.1 <0.1	LCS-6	100%
gamma-BHC	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	98395-65	<0.1 <0.1	LCS-6	100%
Heptachlor	mg/kg	98395-65	<0.1 <0.1	LCS-6	108%
delta-BHC	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	98395-65	<0.1 <0.1	LCS-6	103%
Heptachlor Epoxide	mg/kg	98395-65	<0.1 <0.1	LCS-6	96%
gamma-Chlordane	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	98395-65	<0.1 <0.1	LCS-6	110%
Dieldrin	mg/kg	98395-65	<0.1 <0.1	LCS-6	100%
Endrin	mg/kg	98395-65	<0.1 <0.1	LCS-6	95%
pp-DDD	mg/kg	98395-65	<0.1 <0.1	LCS-6	110%
Endosulfan II	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	98395-65	<0.1 <0.1	LCS-6	113%
Methoxychlor	mg/kg	98395-65	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%	98395-65	107 108 RPD: 1	LCS-6	106%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-97	04/10/2013 04/10/2013	LCS-6	04/10/2013
Date analysed	-	98395-97	04/10/2013 04/10/2013	LCS-6	04/10/2013
Diazinon	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	98395-97	<0.1 <0.1	LCS-6	88%
Fenitrothion	mg/kg	98395-97	<0.1 <0.1	LCS-6	128%
Bromophos-ethyl	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	98395-97	<0.1 <0.1	LCS-6	104%
Surrogate TCMX	%	98395-97	105 110 RPD: 5	LCS-6	104%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Arochlor 1016	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	98395-118	<0.1 <0.1	98395-34	101%
Arochlor 1260	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	98395-118	107 107 RPD: 0	98395-34	95%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98395-65	04/10/2013 04/10/2013	LCS-2	04/10/2013
Date analysed	-	98395-65	08/10/2013 08/10/2013	LCS-2	08/10/2013
Arsenic	mg/kg	98395-65	<4 <4	LCS-2	100%
Cadmium	mg/kg	98395-65	<0.4 <0.4	LCS-2	103%
Chromium	mg/kg	98395-65	15 13 RPD: 14	LCS-2	102%
Copper	mg/kg	98395-65	21 20 RPD: 5	LCS-2	102%
Lead	mg/kg	98395-65	23 20 RPD: 14	LCS-2	100%
Mercury	mg/kg	98395-65	<0.1 <0.1	LCS-2	87%
Nickel	mg/kg	98395-65	11 11 RPD: 0	LCS-2	87%
Zinc	mg/kg	98395-65	110 99 RPD: 11	LCS-2	103%
Iron	mg/kg	[NT]	[NT]	LCS-2	102%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Asbestos ID - soils	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date analysed	-	[NT]	[NT]		
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-97	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-97	04/10/2013 04/10/2013	98395-34	04/10/2013
HCB	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	98395-97	<0.1 <0.1	98395-34	103%
gamma-BHC	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	98395-97	<0.1 <0.1	98395-34	103%
Heptachlor	mg/kg	98395-97	<0.1 <0.1	98395-34	118%
delta-BHC	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	98395-97	<0.1 <0.1	98395-34	107%
Heptachlor Epoxide	mg/kg	98395-97	<0.1 <0.1	98395-34	100%
gamma-Chlordane	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	98395-97	<0.1 <0.1	98395-34	114%
Dieldrin	mg/kg	98395-97	<0.1 <0.1	98395-34	104%
Endrin	mg/kg	98395-97	<0.1 <0.1	98395-34	104%
pp-DDD	mg/kg	98395-97	<0.1 <0.1	98395-34	114%
Endosulfan II	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	98395-97	<0.1 <0.1	98395-34	122%
Methoxychlor	mg/kg	98395-97	<0.1 <0.1	[NR]	[NR]
Surrogate TCMX	%	98395-97	105 110 RPD: 5	98395-34	107%

Client Reference: 43002, Eastern Creek

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-118	04/10/2013 04/10/2013	98395-34	04/10/2013
Diazinon	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	98395-118	<0.1 <0.1	98395-34	89%
Fenitrothion	mg/kg	98395-118	<0.1 <0.1	98395-34	126%
Bromophos-ethyl	mg/kg	98395-118	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	98395-118	<0.1 <0.1	98395-34	103%
Surrogate TCMX	%	98395-118	107 107 RPD: 0	98395-34	105%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98395-97	04/10/2013 04/10/2013	98395-34	04/10/2013
Date analysed	-	98395-97	08/10/2013 08/10/2013	98395-34	08/10/2013
Arsenic	mg/kg	98395-97	5 6 RPD: 18	98395-34	103%
Cadmium	mg/kg	98395-97	<0.4 <0.4	98395-34	99%
Chromium	mg/kg	98395-97	21 20 RPD: 5	98395-34	103%
Copper	mg/kg	98395-97	22 23 RPD: 4	98395-34	80%
Lead	mg/kg	98395-97	18 22 RPD: 20	98395-34	91%
Mercury	mg/kg	98395-97	<0.1 <0.1	98395-34	87%
Nickel	mg/kg	98395-97	11 11 RPD: 0	98395-34	88%
Zinc	mg/kg	98395-97	41 46 RPD: 11	98395-34	90%
Iron	mg/kg	[NT]	[NT]	98395-34	#
QUALITY CONTROL Asbestos ID - soils	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date analysed	-	[NT]	[NT]		
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	-	98395-118	04/10/2013 04/10/2013		
Date analysed	-	98395-118	04/10/2013 04/10/2013		
HCB	mg/kg	98395-118	<0.1 <0.1		
alpha-BHC	mg/kg	98395-118	<0.1 <0.1		
gamma-BHC	mg/kg	98395-118	<0.1 <0.1		
beta-BHC	mg/kg	98395-118	<0.1 <0.1		
Heptachlor	mg/kg	98395-118	<0.1 <0.1		
delta-BHC	mg/kg	98395-118	<0.1 <0.1		
Aldrin	mg/kg	98395-118	<0.1 <0.1		
Heptachlor Epoxide	mg/kg	98395-118	<0.1 <0.1		
gamma-Chlordane	mg/kg	98395-118	<0.1 <0.1		

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
alpha-chlordane	mg/kg	98395-118	<0.1 <0.1		
Endosulfan I	mg/kg	98395-118	<0.1 <0.1		
pp-DDE	mg/kg	98395-118	<0.1 <0.1		
Dieldrin	mg/kg	98395-118	<0.1 <0.1		
Endrin	mg/kg	98395-118	<0.1 <0.1		
pp-DDD	mg/kg	98395-118	<0.1 <0.1		
Endosulfan II	mg/kg	98395-118	<0.1 <0.1		
pp-DDT	mg/kg	98395-118	<0.1 <0.1		
Endrin Aldehyde	mg/kg	98395-118	<0.1 <0.1		
Endosulfan Sulphate	mg/kg	98395-118	<0.1 <0.1		
Methoxychlor	mg/kg	98395-118	<0.1 <0.1		
Surrogate TCMX	%	98395-118	107 107 RPD: 0		
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	98395-122	04/10/2013
Date analysed	-	[NT]	[NT]	98395-122	04/10/2013
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	98395-122	106%
Fenitrothion	mg/kg	[NT]	[NT]	98395-122	117%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	98395-122	97%
Surrogate TCMX	%	[NT]	[NT]	98395-122	107%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	98395-118	04/10/2013 04/10/2013	98395-83	04/10/2013
Date analysed	-	98395-118	08/10/2013 08/10/2013	98395-83	08/10/2013
Arsenic	mg/kg	98395-118	<4 <4	98395-83	86%
Cadmium	mg/kg	98395-118	<0.4 <0.4	98395-83	82%
Chromium	mg/kg	98395-118	15 18 RPD: 18	98395-83	89%
Copper	mg/kg	98395-118	28 22 RPD: 24	98395-83	106%
Lead	mg/kg	98395-118	17 16 RPD: 6	98395-83	77%
Mercury	mg/kg	98395-118	<0.1 <0.1	98395-83	89%
Nickel	mg/kg	98395-118	12 10 RPD: 18	98395-83	79%
Zinc	mg/kg	98395-118	55 42 RPD: 27	98395-83	74%
Iron	mg/kg	98395-118	40000 31000 RPD: 25	[NR]	[NR]

QUALITY CONTROL Asbestos ID - soils	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date analysed	-	[NT]	[NT]

Report Comments:

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 98395-6 for Fe. Therefore a triplicate result has been issued as laboratory sample number 98395-128.

Acid Extractable Metals in Soil: # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos in soil:

This report is consistent with the analytical procedures and reporting recommendations in the Western Australian Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009.

Asbestos in soil samples 98395-5, 6, 9, 43 & 83:

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.

Triazine Herbicides & Phenoxy Acid Herbicides (both in soil) analysed by NMI.
Report No. Rn0992938.

Triazine Herbicides & Phenoxy Acid Herbicides (both in water) analysed by NMI.
Report No. RN0992941.

Asbestos ID was analysed by Approved Identifier:	Paul Ching, Alex Tam
Asbestos ID was authorised by Approved Signatory:	Matt Mansfield

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	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 and 10-140% for SVOC and speciated phenols is acceptable.

IMSO Forms013 - Chain of Custody

7

CHAIN OF CUSTODY



PROJECT NO.: 67002						LABORATORY BATCH NO.																																																																																																																																																																																																																																																																																																																																																																																																																										
PROJECT NAME: Rosen Creek						SAMPLERS: M. Greenwald																																																																																																																																																																																																																																																																																																																																																																																																																										
SEND REPORT TO: Thadley						SEND INVOICE TO: C. NG						PHONE: 02 82450300						EMAIL: thadley@jbsg.com.au																																																																																																																																																																																																																																																																																																																																																																																																														
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>SAMPLE ID</th> <th>MATRIX</th> <th>DATE</th> <th>TIME</th> <th>TYPE & PRESERVATIVE</th> <th>pH</th> <th>Lead</th> <th>PAHs</th> <th>TH/STX</th> <th>Metals</th> <th>DOC</th> <th>Monomers</th> <th>OCF/OPH</th> <th>PCBY</th> <th>ASIP/HELP</th> <th>Fe</th> <th>Organic Matter</th> <th>CEC</th> <th>PH</th> <th>Asbestos</th> <th>NOTES</th> </tr> </thead> <tbody> <tr> <td>19 HA10</td> <td>?</td> <td>0.3-0.4</td> <td>26.9.13</td> <td>Jar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20 HA11</td> <td>0.0-0.2</td> <td></td> <td></td> <td>Bag & Jar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>21 HA11</td> <td>0.4-0.5</td> <td></td> <td></td> <td></td> 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<td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>26 HA14</td> <td>0.0-0.2</td> <td></td> <td>27.9.13</td> <td>Jar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>27 HA14</td> <td>0.4-0.5</td> <td></td> <td></td> <td>Jar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>28 HA15</td> <td>0.0-0.2</td> <td></td> <td></td> <td>Bag & Jar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>29 HA15</td> <td>0.4-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>30 HA16</td> <td>0.0-0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>31 HA16</td> <td>0.3-0.4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>32 HA17</td> <td>0.0-0.2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>33 HA18</td> <td>0.4-0.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>127 HA17a</td> <td>0.0-0.1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>124 HA17a</td> <td>P.C.S</td> <td></td> <td></td> <td>Bag</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>34 HA18</td> <td>0.0-0.2</td> <td></td> <td></td> <td>Bag & Jar</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> </tbody> </table>																		SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TH/STX	Metals	DOC	Monomers	OCF/OPH	PCBY	ASIP/HELP	Fe	Organic Matter	CEC	PH	Asbestos	NOTES	19 HA10	?	0.3-0.4	26.9.13	Jar																	20 HA11	0.0-0.2			Bag & Jar																	21 HA11	0.4-0.5																				22 HA12	0.0-0.3																				23 HA12	0.4-0.5	0.5-0.6																			24 HA13	0.0-0.2																				25 HA13	0.4-0.5																				26 HA14	0.0-0.2		27.9.13	Jar																	27 HA14	0.4-0.5			Jar																	28 HA15	0.0-0.2			Bag & Jar																	29 HA15	0.4-0.6																				30 HA16	0.0-0.1																				31 HA16	0.3-0.4																				32 HA17	0.0-0.2																				33 HA18	0.4-0.6																				127 HA17a	0.0-0.1																				124 HA17a	P.C.S			Bag																	34 HA18	0.0-0.2			Bag & Jar		X	X	X				X	X		X	X	X	X		
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TH/STX	Metals	DOC	Monomers	OCF/OPH	PCBY	ASIP/HELP	Fe	Organic Matter	CEC	PH	Asbestos	NOTES																																																																																																																																																																																																																																																																																																																																																																																																												
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RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: J.A.C	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS&G		TRANSPORT CO.		OF: BUS	3/10/13	COOLER TEMP..... deg.C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP..... deg.C	

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

CHAIN OF CUSTODY



PROJECT NO.: 63002							LABORATORY BATCH NO.														
PROJECT NAME:							SAMPLERS: M. Greenwood														
SEND REPORT TO: Harding							PHONE: 02 82450300														
DATE NEEDED BY: Standard							EMAIL: Harding & Greenwood @ jbag.com.au														
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:							QC LEVEL: NEN 2017														
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHS	TPH/BTEX	Metals	VOCs	Herbicides	PCBs/OPPs	PCPs	ASL/PAHs	PC	Water	Organic	CEC	PH	ASAP	Notes
35 HA18 - 0.3-0.4	Soil	27.9.13		Bag & Jar																	
36 HA19 - 0.0-0.2				Bag																	
37 HA19 - 0.3-0.5																					
38 HA20 - 0.0-0.1																					
39 HA20 - 0.2-0.4																					
40 HA20 - 0.5-0.6																					
41 HA21 - 0.0-0.1				Jar					X			X									
42 HA21 - 0.2-0.3																					
43 HA21 - 0.5-0.6									X											X	
44 HA22 - 0.0-0.1				Jar & Bag																	
45 HA22 - 0.3-0.4				Jar & Bag																	
46 HA23 - 0.0-0.2				Jar & Bag					X			X								X	
47 HA23 - 0.3-0.4				4																	
48 HA24 - 0.0-0.2				Jar & Bag		X	X	X				X								X	
49 QA04				Jar & Bag				X													
50 TS	water	26.9.13		vial				X													
51 TR	water	26.9.13		vial				X													

RELINQUISHED BY:

NAME: DATE:

OF: JBS&G

NAME: DATE:

OF:

METHOD OF SHIPMENT:

CONSIGNMENT NOTE NO.

TRANSPORT CO.

CONSIGNMENT NOTE NO.

TRANSPORT CO.

RECEIVED BY:

NAME: DATE:

OF: ELS

NAME: DATE:

OF:

FOR RECEIVING LAB USE ONLY:

COOLER SEAL - Yes..... No..... Intact..... Broken.....

COOLER TEMP..... deg C

COOLER SEAL - Yes..... No..... Intact..... Broken.....

COOLER TEMP..... deg C

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

4.30 ppm



CHAIN OF CUSTODY

PROJECT NO.: 43002						LABORATORY BATCH NO.																	
PROJECT NAME: Eastern Creek						SAMPLERS: M. Greenwood																	
SEND REPORT TO: +harding						SEND INVOICE TO: C.NG						PHONE: 02 82450300						EMAIL: +harding & agnewwood@jbsg.com.au					
DATE NEEDED BY: standard						QC LEVEL: alpha 2012																	
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																							
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TOH/STX	VOCS	metals	pesticides	OC/PAHs	PBS	ASCE/PLP	Fe	O. number	CEL	pH	Asbestos	NOTES			
TS	water	27.9.13		vial				X															
TS	water	27.9.13		vial				X															
Rinse 1		26.9.13		Amber, 2x vials, metal			X	X	X	X		X	X										
Rinse 2		26.9.13	7.9.13	Amber, 2x vials, metal			X	X	X	X		X	X										
~~HAZ - 0.0-0.6~~		~~27.9.13~~																					
BP01 - 0.0-0.2		26.9.13		Jar & Bag			X		X										X				
~~BP01 - 0.0-0.5~~																							
BP01 - 0.3-0.4	0.4-0.5	26.9.13																	X				
~~BP01~~																							
BP02 - 0.0-0.3		27.9.13					X	X		X		X	X						X				
BP02 - 0.4-0.5		27.9.13																					
BP03 - 0.0-0.3																							
BP04 - 0.0-0.1							X	X		X		X	X						X				
BP04 - 0.3-0.4																							
SP06																							
SP07 - 0.0-0.3																							

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: S.H.C	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS&G		TRANSPORT CO.		OF: BS	2/10/13	COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

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

coc's for eastern creek



CHAIN OF CUSTODY

PROJECT NO.: 63802						LABORATORY BATCH NO.																				
PROJECT NAME: Eastern Creek						SAMPLERS: M. Greenwood & G. Black																				
SEND REPORT TO: Harding						SEND INVOICE TO: G. NG.						PHONE: 02 82450300						EMAIL: tharding & mgreenwood@jbsg.com.au								
DATE NEEDED BY: Standard						QC LEVEL: Normal 2013																				
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																										
SAMPLE ID						MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAHs	TPH/STX	8 metals	VOC's	Pesticides	OC's/OT's	PCB's	ASL/PAH	Fe	Organic Matter	CEC	pH	Asbestos	NOTES	
65	SS-01-0.0-0.1						Soil	30.9.13		Jar				X				X								
66	SS-02-0.0-0.1																									
67	SS-03-0.0-0.1																									
68	SS-03-0.2-0.3																									
69	SS-04-0.0-0.1												X				X									
70	SS-04-0.2-0.3																									
71	SS-05-0.0-0.1												X				X									
72	SS-06-0.0-0.1																									
73	SS-07-0.0-0.1																									
74	SS-08-0.2-0.3						0.0-0.1 SL																			
75	SS-09-0.0-0.1												X				X									
76	SS-09-0.2-0.3																									
77	SS-10-0.0-0.1																									
78	SS-10-0.2-0.3												X				X									
79	SS-11-0.0-0.1																X									
80	SS-12-0.0-0.1																									
81	SS-13-0.0-0.1																									
82	SS-13-0.2-0.3												X				X									
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:						FOR RECEIVING LAB USE ONLY:								
NAME: DATE:						CONSIGNMENT NOTE NO.						NAME: J. A. C. DATE: 2/10/13						COOLER SEAL - Yes..... No..... Intact..... Broken.....								
OF: JBS&G						TRANSPORT CO.						OF: BUS						COOLER TEMP..... deg C								
NAME: DATE:						CONSIGNMENT NOTE NO.						NAME: DATE:						COOLER SEAL - Yes..... No..... Intact..... Broken.....								
OF:						TRANSPORT CO.						OF:						COOLER TEMP..... deg C								

CHAIN OF CUSTODY



PROJECT NO.: 48002						LABORATORY BATCH NO.																	
PROJECT NAME: Caston Creek						SAMPLERS: M. Greenwood & G. Black																	
SEND REPORT TO: Harding						SEND INVOICE TO: G. NG						PHONE: 02 82450300						EMAIL: harding@ngreenwood.com.au					
DATE NEEDED BY: Standard						QC LEVEL: N/A																	
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																							
	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	Lead	PAH	TRA/STER	Benthic	VOCs	Herbicides	OCs/OPPs	PCBs	ATP/TPW	Fe	Organic Matter	CEC	pH	Asbestos		NOTES	
83	SS-14_0.0-0.1	Soil	30.9.13		Jar					X										X			
84	SS-15_0.0-0.1																						
85	SS-16_0.0-0.05																						
86	SS-16_0.2-0.3																						
	~~SS-06~~																						
	~~SS-06~~																						
87	HA25_0.0-0.2				Jar & Bag					X										X			
88	HA26_0.0-0.3	0.0-0.2																					
89	HA27_0.0-0.1									X										X			
90	HA27_0.2-0.3																						
91	HA28_0.0-0.2									X										X			
92	HA29_0.0-0.2																						
	~~HA28~~																						
93	HA30_0.0-0.2																						
94	HA31_0.0-0.2									X			X							X			
95	HA32_0.0-0.2																						
96	HA33_0.0-0.2																			X			
97	HA34_0.0-0.2									X			X							X			
RELINQUISHED BY:						METHOD OF SHIPMENT:						RECEIVED BY:						FOR RECEIVING LAB USE ONLY:					
NAME:			DATE:			CONSIGNMENT NOTE NO.						NAME:			DATE:			COOLER SEAL - Yes..... No Intact Broken					
OF: JBS&G						TRANSPORT CO.						OF: JBS			2/10/13			COOLER TEMP deg.C					
NAME:			DATE:			CONSIGNMENT NOTE NO.						NAME:			DATE:			COOLER SEAL - Yes..... No Intact Broken					
OF:						TRANSPORT CO.						OF:						COOLER TEMP deg.C					

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

CHAIN OF CUSTODY



PROJECT NO.: <u>U3002</u>						LABORATORY BATCH NO.											
PROJECT NAME: <u>Foxton Creek</u>						SAMPLERS <u>M. Greenwood & G. Bickel</u>											
SEND REPORT TO: <u>Tharling</u>						SEND INVOICE TO: <u>C. NG</u>						PHONE: 02 82450300 EMAIL: <u>tharling@ngreenwood.com.au</u>					
DATE NEEDED BY: <u>Standard</u>						QC LEVEL: <u>2013</u>											
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																	

	SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	VOCs	Sulfides	TPH/BTEX	BTEX	VOCs	Herbicides	PCPs/OPPs	PCBs	ASL/PAHs	Fe	Dissolved Metals	CEC	pH	Asbestos	NOTES
98	HA35	0.0-0.1	Soil	30.9.3	Soil & Sed																
99	HA36	0.0-0.2																			
100	HA37	0.0-0.2																			
101	HA38	0.0-0.1																			
102	HA39	0.0-0.1																			
103	HA40	0.0-0.1																			
104	HA41	0.0-0.2																			
105	HA42	0.0-0.1																			
106	HA43	0.0-0.1																			
107	HA44	0.0-0.1																			
108	HA45	0.0-0.1																			
109	HA46	0.0-0.1																			
110	HA47	0.0-0.1																			
111	HA48	0.0-0.1																			
112	HA49	0.0-0.1																			
113	HA50	0.0-0.1																			
114	HA51	0.0-0.1																			
115	HA52	0.0-0.1																			

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF: JBS&G		TRANSPORT CO.		OF: <u>ECB</u>	<u>2/10/13</u>	COOLER TEMP..... deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP..... deg C	

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

CERTIFICATE OF ANALYSIS

Work Order	: ES1321711	Page	: 1 of 10
Client	: JBS&G (NSW & WA) Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: T HARDING	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tharding@jbsg.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8245 0300	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 43002 EASTERN CREEK	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 03-OCT-2013
Sampler	: BR	Issue Date	: 11-OCT-2013
Site	: ----		
Quote number	: SY/450/13	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Di-An Dao		Sydney Inorganics
Hoa Nguyen	Senior Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

LOR = Limit of reporting

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

- **ALS is not NATA accredited for the analysis of Bifenthrin in soils when performed under ALS Method EP068D**



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	5.0	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	18.6	2.7	11.3	13.5	----
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	2.7	----
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	8.5	----
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	0.6	----
Exchangeable Sodium	----	0.1	meq/100g	----	----	----	0.6	----
Cation Exchange Capacity	----	0.1	meq/100g	----	----	----	12.3	----
EG005T: Total Metals by ICP-AES								
Iron	7439-89-6	50	mg/kg	----	----	----	29900	----
Arsenic	7440-38-2	5	mg/kg	7	<5	9	5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	23	5	21	19	----
Copper	7440-50-8	5	mg/kg	28	13	31	24	----
Lead	7439-92-1	5	mg/kg	33	<5	25	24	----
Nickel	7440-02-0	2	mg/kg	12	46	12	9	----
Zinc	7440-66-6	5	mg/kg	53	26	60	85	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP004: Organic Matter								
Organic Matter	----	0.5	%	----	----	----	3.8	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	----
4,4'-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	<0.05	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	<0.05	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	----	----	----	<0.5	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	----	<0.5	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	----	<0.5	----
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	----	<0.5	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	----	<0.5	----
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	----	<0.5	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	----	<0.5	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	----	<0.5	----
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	----	<0.5	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	----	<5	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	----	<5	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	----	<5	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	----	<5	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	----	<0.5	----
EP074D: Fumigants								
2,2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	<0.5	----
1,2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	<0.5	----
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	<0.5	----
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	<0.5	----
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	<0.5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	<5	----
Chloromethane	74-87-3	5	mg/kg	----	----	----	<5	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	<5	----
Bromomethane	74-83-9	5	mg/kg	----	----	----	<5	----
Chloroethane	75-00-3	5	mg/kg	----	----	----	<5	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	<5	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	<0.5	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	<0.5	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	<0.5	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	<0.5	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	<0.5	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	<0.5	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	<0.5	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	<0.5	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	<0.5	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	<0.5	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	<0.5	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	<0.5	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	<0.5	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	<0.5	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	----	<0.5	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	----	<0.5	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	----	<0.5	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	----	<0.5	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	----	<0.5	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	<0.5	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	----	<0.5	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	----	<0.5	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	<0.5	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	<0.5	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	<0.5	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	<0.5	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	<0.5	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	<0.5	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	<0.5	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP074G: Trihalomethanes - Continued								
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	<0.5	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	<0.5	----
Bromoform	75-25-2	0.5	mg/kg	----	----	----	<0.5	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	0.6	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	1.2	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				QC04	QC05	QC06	QC07	----
				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 - Continued								
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	<10	----
>C10 - C16 Fraction	>C10_C16	50	mg/kg	----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	----	----	----	<0.2	----
^ Total Xylenes	1330-20-7	0.5	mg/kg	----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	72.1	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	82.8	----	90.8	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	93.0	----	98.9	----
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	----	100	----
Toluene-D8	2037-26-5	0.1	%	----	----	----	94.9	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	----	90.1	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	----	95.3	----
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	----	97.8	----
2,4,6-Tribromophenol	118-79-6	0.1	%	----	----	----	71.7	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	----	93.4	----
Anthracene-d10	1719-06-8	0.1	%	----	----	----	95.7	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

				QC04	QC05	QC06	QC07	----
Client sampling date / time				27-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	30-SEP-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1321711-001	ES1321711-002	ES1321711-003	ES1321711-004	----
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	----	97.6	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	----	104	----
Toluene-D8	2037-26-5	0.1	%	----	----	----	96.8	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	----	93.3	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

QUALITY CONTROL REPORT

Work Order	: ES1321711	Page	: 1 of 16
Client	: JBS&G (NSW & WA) Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: T HARDING	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tharding@jbbsg.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8245 0300	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 43002 EASTERN CREEK	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 03-OCT-2013
Sampler	: BR	Issue Date	: 11-OCT-2013
Order number	: ----		
Quote number	: SY/450/13	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited
Laboratory 825

Accredited for
compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Di-An Dao		Sydney Inorganics
Hoa Nguyen	Senior Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA002 : pH (Soils) (QC Lot: 3091730)									
ES1321616-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	7.7	7.7	0.0	0% - 20%
EA055: Moisture Content (QC Lot: 3092372)									
ES1321690-003	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	13.6	13.6	0.0	0% - 50%
ED008: Exchangeable Cations (QC Lot: 3097143)									
ES1321679-046	Anonymous	ED008: Exchangeable Calcium	----	0.1	meq/100g	1.9	2.0	0.0	0% - 20%
		ED008: Exchangeable Magnesium	----	0.1	meq/100g	5.0	5.0	2.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	0.2	0.2	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	1.5	1.5	0.0	0% - 20%
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	8.6	8.7	1.7	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 3097961)									
ES1321711-001	QC04	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	23	30	26.3	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	11	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	28	26	6.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	33	36	7.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	53	50	5.1	0% - 50%
		EG005T: Iron	7439-89-6	50	mg/kg	52500	58500	10.8	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3097962)									
ES1321711-001	QC04	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP004: Organic Matter (QC Lot: 3101729)									
ES1321264-149	Anonymous	EP004: Organic Matter	----	0.5	%	<0.5	<0.5	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3091627)									
ES1321712-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3091626)									
ES1321712-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3091626) - continued									
ES1321712-001	Anonymous	EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3091626)									
ES1321712-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Page : 5 of 16
 Work Order : ES1321711
 Client : JBS&G (NSW & WA) Pty Ltd
 Project : 43002 EASTERN CREEK



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3091740) - continued									
ES1321711-004	QC07	EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3091740) - continued									
ES1321711-004	QC07	EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 3091740)									
ES1321711-004	QC07	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3091630)									
ES1321711-004	QC07	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3091629)							
ES1321711-004	QC07	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit

Page : 7 of 16
 Work Order : ES1321711
 Client : JBS&G (NSW & WA) Pty Ltd
 Project : 43002 EASTERN CREEK



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3091629) - continued									
ES1321711-004	QC07	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3091739)									
ES1321711-004	QC07	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3091629)									
ES1321711-004	QC07	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3091739)									
ES1321711-004	QC07	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 3091739)									
ES1321711-004	QC07	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED008: Exchangeable Cations (QCLot: 3097143)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.1	0.1 meq/100g	110	90	128
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	101	86	120
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	106	85	135
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	105	86	128
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3097961)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	111	87	129
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	102	80	122
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	97.7	71	133
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	113	86	128
EG005T: Iron	7439-89-6	50	mg/kg	<50	8400 mg/kg	74.2	70	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	102	81	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	108	84	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	105	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3097962)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	86.7	66	112
EP004: Organic Matter (QCLot: 3101729)								
EP004: Organic Matter	----	0.5	%	<0.5	4.58 %	95.6	85	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3091627)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	88.4	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 3091626)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	80.3	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	74.0	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.7	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	79.2	66	118
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	76.4	69	117



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP074B: Oxygenated Compounds (QCLot: 3091740) - continued								
EP074: Vinyl Acetate	108-05-4	1	mg/kg	----	10 mg/kg	42.3	29.6	156
		5	mg/kg	<5	----	----	----	----
EP074: 2-Butanone (MEK)	78-93-3	1	mg/kg	----	10 mg/kg	114	58	136
		5	mg/kg	<5	----	----	----	----
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	1	mg/kg	----	10 mg/kg	100	54	138
		5	mg/kg	<5	----	----	----	----
EP074: 2-Hexanone (MBK)	591-78-6	1	mg/kg	----	10 mg/kg	101	54	136
		5	mg/kg	<5	----	----	----	----
EP074C: Sulfonated Compounds (QCLot: 3091740)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	62.6	54	126
EP074D: Fumigants (QCLot: 3091740)								
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	64.6	55	133
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	78.9	69	127
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	71.4	54	124
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	69.4	51	125
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	83.1	66	126
EP074E: Halogenated Aliphatic Compounds (QCLot: 3091740)								
EP074: Dichlorodifluoromethane	75-71-8	1	mg/kg	----	10 mg/kg	31.3	30	148
		5	mg/kg	<5	----	----	----	----
EP074: Chloromethane	74-87-3	1	mg/kg	----	10 mg/kg	44.2	41	141
		5	mg/kg	<5	----	----	----	----
EP074: Vinyl chloride	75-01-4	1	mg/kg	----	10 mg/kg	78.3	43	147
		5	mg/kg	<5	----	----	----	----
EP074: Bromomethane	74-83-9	1	mg/kg	----	10 mg/kg	63.1	47	141
		5	mg/kg	<5	----	----	----	----
EP074: Chloroethane	75-00-3	1	mg/kg	----	10 mg/kg	61.1	49	143
		5	mg/kg	<5	----	----	----	----
EP074: Trichlorofluoromethane	75-69-4	1	mg/kg	----	10 mg/kg	62.9	49	135
		5	mg/kg	<5	----	----	----	----
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	65.0	54	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	52.4	43	129
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	71.5	62	130
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	79.0	66	132
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	79.6	66	132
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	70.0	62	126
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	73.1	64	128
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	71.7	59	125
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	89.2	65	123
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	74.4	64	120



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP074E: Halogenated Aliphatic Compounds (QCLot: 3091740) - continued								
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	89.2	65	127
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	82.8	70	130
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	83.7	72	128
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	70.0	67	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	64.6	62	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	76.5	54	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	78.2	55	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	93.7	56	132
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	65	135
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	79.7	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	92.6	53	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	59.2	48	136
EP074F: Halogenated Aromatic Compounds (QCLot: 3091740)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	77.7	70	128
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	77.4	67	127
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	73.9	64	130
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	73.2	62	130
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	73.4	63	129
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	75.2	63	129
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	78.8	66	128
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	61.2	54	134
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	70.4	60	132
EP074G: Trihalomethanes (QCLot: 3091740)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	78.6	62	120
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	80.9	61	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	77.8	63	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	87.6	60	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3091630)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	107	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	104	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	105	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	107	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	106	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	107	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	107	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	107	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	104	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	107	81	123
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	103	70	118



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3091630) - continued								
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	103	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	97.5	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	97.4	71	113
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	99.3	71.7	113
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	102	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091629)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	111	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	109	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	105	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091739)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	87.7	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091629)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	110	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	107	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	98.5	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091739)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	85.2	68.4	128
EP080: BTEXN (QCLot: 3091739)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	88.6	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	82.7	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	78.2	58	118
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	80.7	60	120
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	80.8	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	81.3	62	138

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery(%) MS	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number			Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3097961)							
ES1321711-001	QC04	EG005T: Arsenic	7440-38-2	50 mg/kg	99.6	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.8	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	70	130

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3097961) - continued							
ES1321711-001	QC04	EG005T: Copper	7440-50-8	125 mg/kg	107	70	130
		EG005T: Lead	7439-92-1	125 mg/kg	102	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70	130
		EG005T: Zinc	7440-66-6	125 mg/kg	99.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3097962)							
ES1321711-001	QC04	EG035T: Mercury	7439-97-6	5 mg/kg	96.5	70	130
EP004: Organic Matter (QCLot: 3101729)							
ES1321711-004	QC07	EP004: Organic Matter	----	4.58 %	43.7	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3091627)							
ES1321712-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.6	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3091626)							
ES1321712-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	83.6	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	77.1	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	89.0	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	82.7	70	130
		EP068: Endrin	72-20-8	2 mg/kg	100	70	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	88.4	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3091626)							
ES1321712-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	104	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	72.8	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	81.4	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.5	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	79.1	70	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3091740)							
ES1321711-004	QC07	EP074: 1,1-Dichloroethene	75-35-4	2.5 mg/kg	90.9	70	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	83.4	70	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3091740)							
ES1321711-004	QC07	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	90.1	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3091630)							
ES1321711-004	QC07	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	104	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091629)							
ES1321711-004	QC07	EP071: C10 - C14 Fraction	----	640 mg/kg	77.8	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	76.3	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	66.8	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091739)							



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091739) - continued							
ES1321711-004	QC07	EP080: C6 - C9 Fraction	----	32.5 mg/kg	92.6	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091629)							
ES1321711-004	QC07	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	98.0	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	70.3	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	54.6	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091739)							
ES1321711-004	QC07	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	92.1	70	130
EP080: BTEXN (QCLot: 3091739)							
ES1321711-004	QC07	EP080: Benzene	71-43-2	2.5 mg/kg	82.0	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	79.1	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	78.2	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	78.2	70	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	80.8	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.3	70	130

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP068A: Organochlorine Pesticides (OC) (QCLot: 3091626)										
ES1321712-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	83.6	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	77.1	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	89.0	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	82.7	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	100	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	88.4	----	70	130	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3091626)										
ES1321712-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	104	----	70	130	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	72.8	----	70	130	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	81.4	----	70	130	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.5	----	70	130	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	79.1	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3091627)										
ES1321712-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.6	----	70	130	----	----

Page : 15 of 16
 Work Order : ES1321711
 Client : JBS&G (NSW & WA) Pty Ltd
 Project : 43002 EASTERN CREEK



Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091629)										
ES1321711-004	QC07	EP071: C10 - C14 Fraction	----	640 mg/kg	77.8	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	76.3	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	66.8	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091629)										
ES1321711-004	QC07	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	98.0	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	70.3	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	54.6	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3091630)										
ES1321711-004	QC07	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	104	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091739)										
ES1321711-004	QC07	EP080: C6 - C9 Fraction	----	32.5 mg/kg	92.6	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3091739)										
ES1321711-004	QC07	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	92.1	----	70	130	----	----
EP080: BTEXN (QCLot: 3091739)										
ES1321711-004	QC07	EP080: Benzene	71-43-2	2.5 mg/kg	82.0	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	79.1	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	78.2	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	78.2	----	70	130	----	----
			106-42-3							
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	80.8	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.3	----	70	130	----	----
EP074E: Halogenated Aliphatic Compounds (QCLot: 3091740)										
ES1321711-004	QC07	EP074: 1,1-Dichloroethene	75-35-4	2.5 mg/kg	90.9	----	70	130	----	----
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	83.4	----	70	130	----	----
EP074F: Halogenated Aromatic Compounds (QCLot: 3091740)										
ES1321711-004	QC07	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	90.1	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3097961)										
ES1321711-001	QC04	EG005T: Arsenic	7440-38-2	50 mg/kg	99.6	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.8	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	106	----	70	130	----	----
		EG005T: Copper	7440-50-8	125 mg/kg	107	----	70	130	----	----
		EG005T: Lead	7439-92-1	125 mg/kg	102	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	101	----	70	130	----	----
		EG005T: Zinc	7440-66-6	125 mg/kg	99.0	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3097962)										
ES1321711-001	QC04	EG035T: Mercury	7439-97-6	5 mg/kg	96.5	----	70	130	----	----



Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	EP004: Organic Matter (QCLot: 3101729)						
ES1321711-004	QC07	EP004: Organic Matter	----	4.58 %	43.7	----	----	----	----	----



Environmental

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: ES1321711	Page	: 1 of 8
Client	: JBS&G (NSW & WA) Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: T HARDING	Contact	: Client Services
Address	: LEVEL 1, 50 MARGARET STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tharding@jbbsg.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 8245 0300	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 8338 1700	Facsimile	: +61-2-8784 8500
Project	: 43002 EASTERN CREEK	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 03-OCT-2013
C-O-C number	: ----	Issue Date	: 11-OCT-2013
Sampler	: BR	No. of samples received	: 4
Order number	: ----	No. of samples analysed	: 4
Quote number	: SY/450/13		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with recommended holding times (USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002 : pH (Soils)							
Soil Glass Jar - Unpreserved (EA002) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	04-OCT-2013	✓
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103) QC04	27-SEP-2013	----	----	----	04-OCT-2013	11-OCT-2013	✓
Soil Glass Jar - Unpreserved (EA055-103) QC05, QC07	30-SEP-2013	----	----	----	04-OCT-2013	14-OCT-2013	✓
ED008: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED008) QC07	30-SEP-2013	10-OCT-2013	28-OCT-2013	✓	10-OCT-2013	28-OCT-2013	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC04	27-SEP-2013	09-OCT-2013	26-MAR-2014	✓	10-OCT-2013	26-MAR-2014	✓
Soil Glass Jar - Unpreserved (EG005T) QC05, QC07	30-SEP-2013	09-OCT-2013	29-MAR-2014	✓	10-OCT-2013	29-MAR-2014	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC04	27-SEP-2013	09-OCT-2013	25-OCT-2013	✓	10-OCT-2013	25-OCT-2013	✓
Soil Glass Jar - Unpreserved (EG035T) QC05, QC07	30-SEP-2013	09-OCT-2013	28-OCT-2013	✓	10-OCT-2013	28-OCT-2013	✓
EP004: Organic Matter							
Soil Glass Jar - Unpreserved (EP004) QC07	30-SEP-2013	11-OCT-2013	28-OCT-2013	✓	11-OCT-2013	28-OCT-2013	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	05-OCT-2013	13-NOV-2013	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) QC05, QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	05-OCT-2013	13-NOV-2013	✓



Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) QC05, QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	05-OCT-2013	13-NOV-2013	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	04-OCT-2013	13-NOV-2013	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC07	30-SEP-2013	04-OCT-2013	07-OCT-2013	✓	04-OCT-2013	07-OCT-2013	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	05-OCT-2013	13-NOV-2013	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	04-OCT-2013	14-OCT-2013	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC07	30-SEP-2013	04-OCT-2013	14-OCT-2013	✓	04-OCT-2013	14-OCT-2013	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Exchangeable Cations with pre-treatment	ED008	1	6	16.7	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Moisture Content	EA055-103	1	9	11.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Organic Matter	EP004	1	3	33.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	3	33.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	3	33.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	10	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	10	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	7	14.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	1	100.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	1	100.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Exchangeable Cations with pre-treatment	ED008	1	6	16.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Organic Matter	EP004	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	7	14.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Exchangeable Cations with pre-treatment	ED008	1	6	16.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Organic Matter	EP004	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	7	14.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Organic Matter	EP004	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement



Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
PAH/Phenols (SIM)	EP075(SIM)	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	7	14.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	1	100.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	(APHA 21st ed., 4500H+) pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (2013) Schedule B(3) (Method 103)
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Exchangeable Cations with pre-treatment	ED008	SOIL	Rayment & Higginson (1992) Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 301)
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Organic Matter	EP004	SOIL	AS1289.4.1.1 - 1997., Dichromate oxidation method after Walkley and Black. This method is compliant with NEPM (2013) Schedule B(3) (Method 105)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (2013) Schedule B(3) (Method 506.1)
Volatile Organic Compounds	EP074	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)

Preparation Methods	Method	Matrix	Method Descriptions



Preparation Methods	Method	Matrix	Method Descriptions
Exchangeable Cations Preparation Method	ED007PR	SOIL	Rayment & Higginson (1992) method 15A1. A 1M NH ₄ Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of distilled water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Organic Matter	EP004-PR	SOIL	AS1289.4.1.1 - 1997., Dichromate oxidation method after Walkley and Black. This method is compliant with NEPM (2013) Schedule B(3) (Method 105)
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na ₂ SO ₄ and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

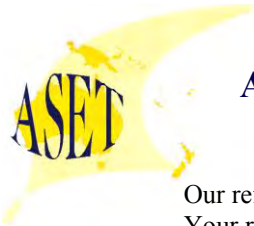
This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET35498/ 38678 / 1 - 1

Your ref: ES1321711

NATA Accreditation No: 14484

8 October 2013

Australian Laboratory Services Pty Ltd
277, Woodpark Road
Smithfield NSW 2164

Attn: Ms Nanthini Coilparampil

Dear Nanthini,

Asbestos Identification

This report presents the results of one sample, forwarded by Australian Laboratory Services Pty Ltd on 4 October 2013, for analysis for asbestos.

1.Introduction: One sample forwarded was examined and analysed for the presence of asbestos.

2. Methods : The sample was examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1.**)

3. Results : **Sample No. 1. ASET35498 / 38678 / 1. ES1321711 - 004 - QC07.**
Approx dimensions 8.5 cm x 8.5 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory



This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635

PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING

Send to ALS

CHAIN OF CUSTODY



PROJECT NO.: 43002				LABORATORY BATCH NO.			
PROJECT NAME: Eastern Creek				SEND INVOICE TO: G. Ng			
SEND REPORT TO: J. Harding				PHONE: 02 8338-1011			
DATE NEEDED BY: Standard				QC LEVEL: NEPM 1999			
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:				EMAIL:			

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	PH	Lead	PAHs	TPH/BTEX	8hm	VOCs	Herbicides	DELs/OPPs	PCBs	ASLP/TLCP	Fe	Organic Matter	CEC	pH	Asbestos	NOTES
1 AC01	Soil	24/9/13		Tar		X	X	X												98077
2 AC02	Soil	24/9/13		Tar		X	X	X												
3 AC02	Soil	24/9/13		Tar		X	X	X												

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME: PT	DATE: 26/9/13	CONSIGNMENT NOTE NO.		NAME: PT	DATE: 26/9/13	COOLER SEAL - Yes..... No.....	Intact..... Broken.....
OF: ELS		TRANSPORT CO.		OF: ELS		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: Steven	DATE: 26/9/13	COOLER SEAL - Yes..... No.....	Intact..... Broken.....
OF:		TRANSPORT CO.		OF: HLS		COOLER TEMP deg C	

Environmental Division
Sydney
Work Order
ES1321259

Telephone : +61-2-8784 8555

98077

Send to ALSE



9838

CHAIN OF CUSTODY

PROJECT NO.: 43002				LABORATORY/BATCH NO.			
PROJECT NAME Eastern Creek				SAMPLERS B. Ragan			
SEND INVOICE TO: G. Ng				PHONE: 08 9838 9838			
DATE REPORT TO: T. Harding				EMAIL:			
DATE NEEDED BY: Standard				QC LEVEL: NEPM 1999			
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:							
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	PH	Lead	Asbestos
QCO1	SOIL	24/9/13		Tar		X	X
QCO2	SOIL	24/9/13		Tar		X	X
QCO3	SOIL	24/9/13		Tar		X	X
QCO4	SOIL	25/9/13		Tar		X	X
QCO5	SOIL	27/9/13		Tar		X	X
QCO6	SOIL	30/9/13		Tar		X	X
QCO7	SOIL	30/9/13		Tar		X	X
Subtotal / Forward Lab / Split WO							
Lab / Analysis: Asbestos							
Organised By / Date:							
Relinquished By / Date:							
Consent / Courier:							
WO No:							
Attach By HQ / Internal Sheet:							
RELINQUISHED BY:				RECEIVED BY:			
NAME:	DATE:	CONSIGNMENT NOTE NO.	METHOD OF SHIPMENT:		NAME:	DATE:	FOR RECEIVING LAB USE ONLY:
OF:		TRANSPORT CO.			COOLER SEAL (Yes/No):	Intact/Broken:	
NAME: <u>same</u>	DATE: <u>03/10</u>	CONSIGNMENT NOTE NO.			COOLER TEMP (deg C):	Intact/Broken:	
OF: <u>BS</u>		TRANSPORT CO.			COOLER SEAL (Yes/No):	Intact/Broken:	
Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; H = Nitric Acid Preserv; C = Sodium Hydroxide Preserv; VC = Hydrochloric Acid Preserv; VS = Sulfuric Acid Preserv; V = Zinc Preserv; E = EDTA Preserv; ST = Sterile Bottle; Q = Other							

JBS Environmental Pty Ltd ABN 57 071 842 638
 Phone: (02) 8338-1011
 Fax: (02) 8338-1700
 1M50 Form 013 - Chain of Custody

Suite 2, 595 Gardeners Road MASCOT NSW 2020
 PO Box 940 MASCOT NSW 1460
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27

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		Name	Name	Signature	Date
A	Tom Harding	Matthew Bennett	Matthew Bennett	Internal review	29/10/2013
B	Tom Harding	Matthew Bennett	Matthew Bennett	Internal review	01/11/2013

