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DETAILED SITE INVESTIGATION

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

February 2016
J142067

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Detailed Site Investigation

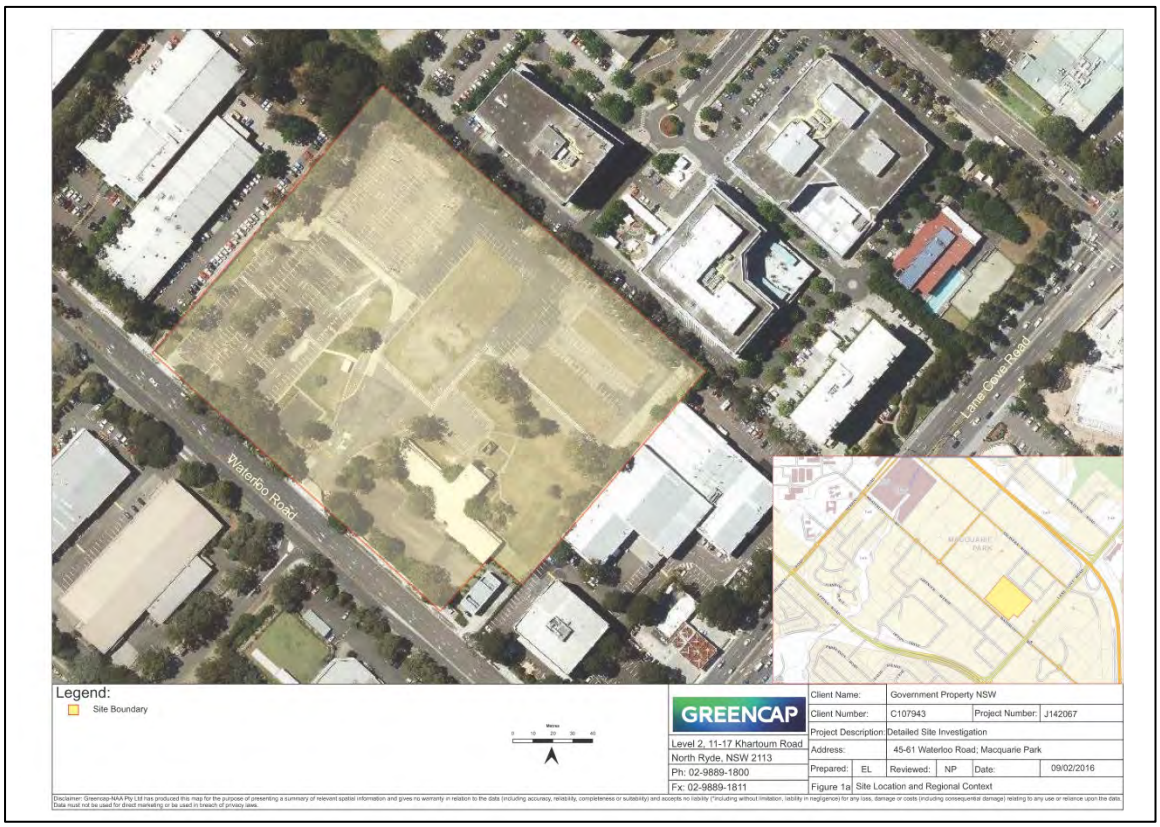
Government Property NSW

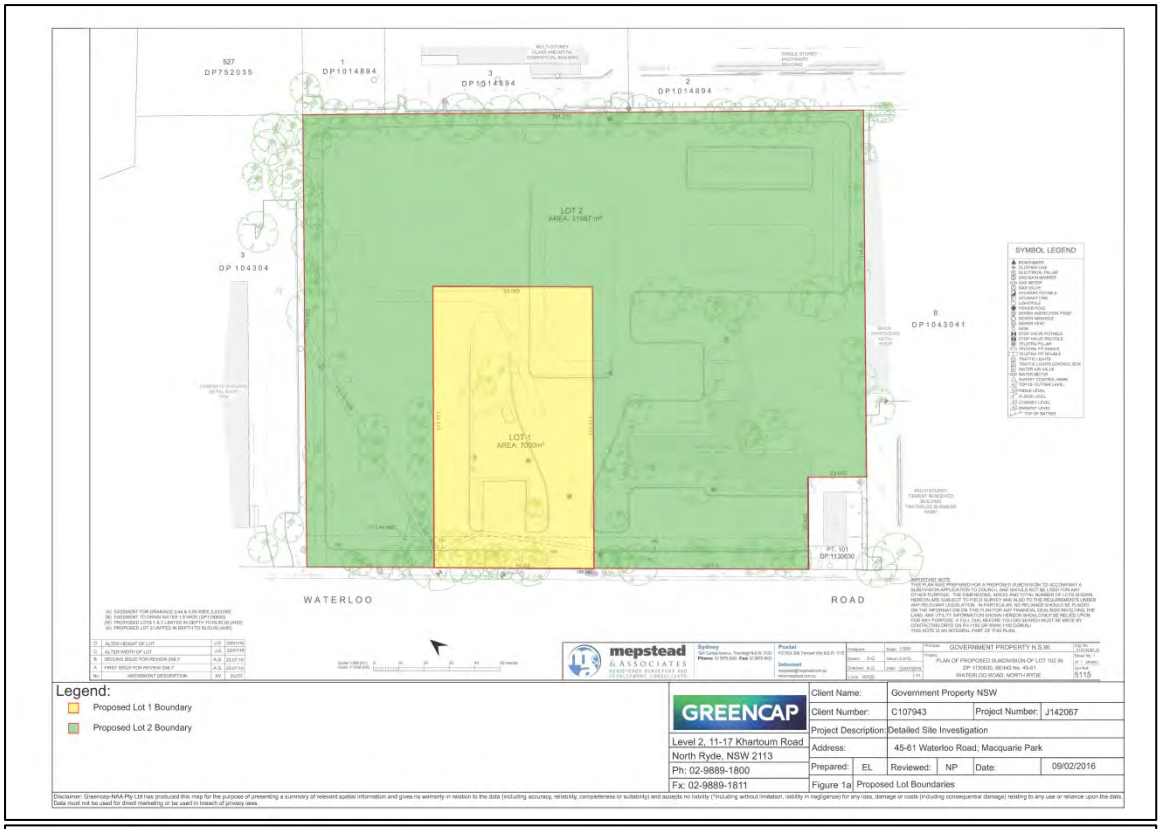
Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Executive Summary

Greencap was engaged by Government Property NSW (GPNSW, the client) to undertake a detailed site investigation (DSI) at 45-61 Waterloo Road, Macquarie Park, NSW (the site). The site comprises the legally identified Lot 102 in Deposited Plan (DP) 1130630 as indicated on Figure 1. Following on from the original investigation (2015) the site is now to be subdivide therefore the investigation has been split into two areas, Proposed Lot 1 and Proposed Lot 2, as indicated in Figure 1a.

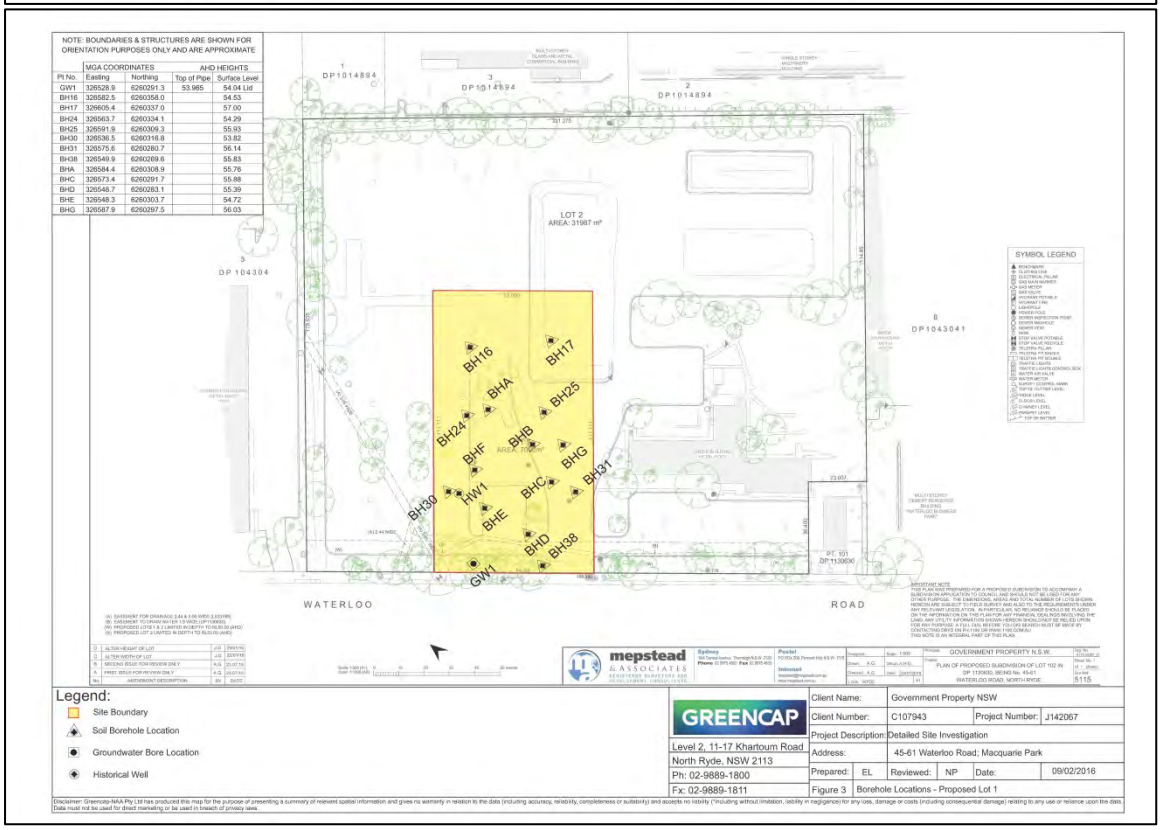
The objective of the investigation was to assess the site for sources of contamination which were flagged in the 2013 PESA report through undertaking a detailed phase 2 assessment as per the NSW EPA (1995) *Contaminated Sites: Sampling Design Guidelines* and the NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites. The locations of the samples taken are identified in Figure 3.





NOTE: BOUNDARIES & STRUCTURES ARE SHOWN FOR ORIENTATION PURPOSES ONLY AND ARE APPROXIMATE

Pt No.	MGA COORDINATES Easting	Northing	AHD HEIGHTS Top of Pipe	Surface Level
GW1	326528.9	6260291.3	53.965	54.04 Lid
BH16	326582.5	6260358.0		54.53
BH17	326605.4	6260337.0		57.00
BH24	326563.7	6260334.1		54.29
BH25	326591.9	6260309.3		55.93
BH30	326536.5	6260318.8		53.82
BH31	326575.6	6260280.7		56.14
BH38	326549.9	6260269.8		55.83
BHA	326584.4	6260308.9		55.78
BHC	326573.4	6260291.7		55.88
BHD	326548.7	6260283.1		55.39
BHE	326548.3	6260303.7		54.72
BHG	326587.9	6260297.5		56.03

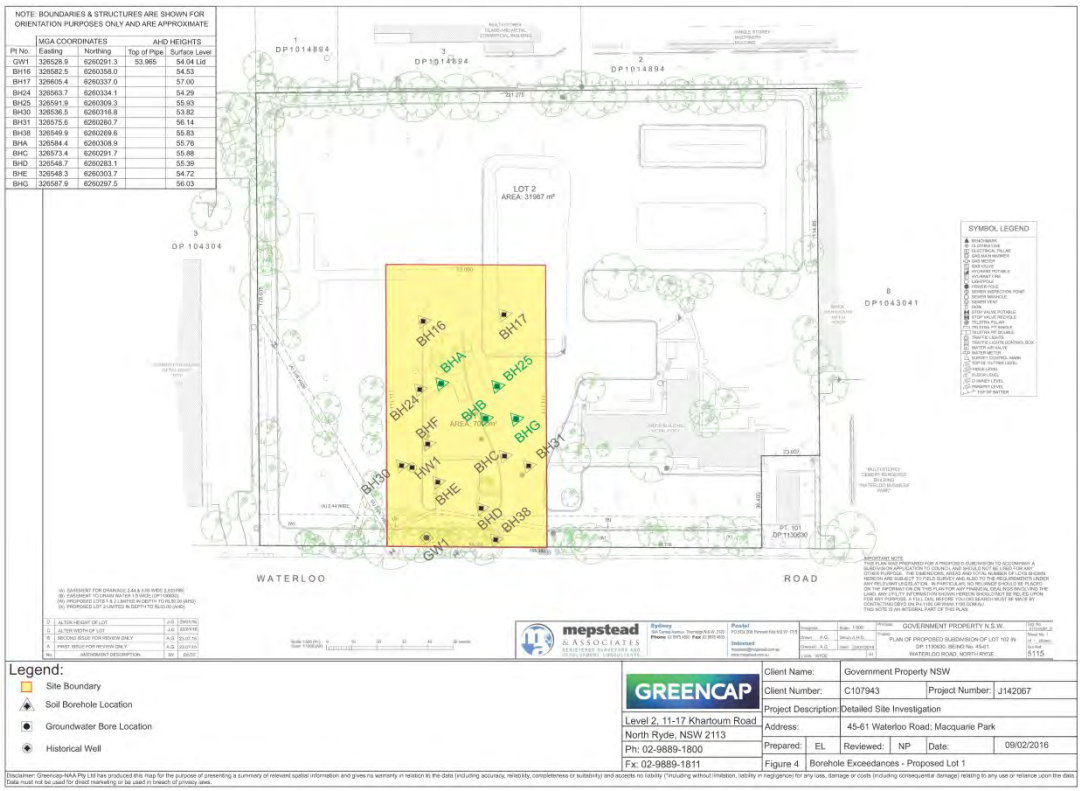


General Observations

- Fill material is present across the majority of the site, generally in the upper 0.5 m and consists of roadbase and clay fill. Deeper fill horizons were noted locally across the site, namely:
  - Sands and crushed sandstone in the vicinity of the former tank farm in the centre of the site. Assumed to be backfill sands which were not removed, as well as backfilled material following the remediation.
- Hydrocarbon odours ranging from faint to moderate were found in the upper two metres of bores drilled in the former tank farm area as indicated on Figure 4.
- A faint sheen on perched water was observed in borehole BH25.

Conclusions based on permitted land use (B3 Commercial Core)

- Groundwater at the site did not appear to be impacted by hydrocarbons. Heavy metal exceedances are attributed naturally occurring background metals in waters sourced from the Wianamatta Shales.
- Some exceedances of the heavy metal Ecological Screening Levels were noted in the soil samples. It is likely that these concentrations are indicative of naturally occurring background concentrations within the residual clay soils. No remediation of this material is considered to be required.
- Concentrations of TRH in soil samples collected from samples BHA, BHB, BHG and BH25 exceed the ESLs (Ecological Screening Levels) and Management Limits. Soil material in this area does not comply with aesthetic requirements as per the NEPM 1999 (moderate odours noted).
- Concentrations of BaP exceed the ESL criteria in BHG and BH25.



Recommendations

- Remediation to remove the impacted material in the area where BHA, BHB, BHG and BH25 were drilled is required. A remediation action plan including remedial volumes, areas and options should be prepared prior to the remediation taking place.
- Further groundwater investigation is warranted at the site due to the fact that only one bore is located within Proposed Lot 1 and soil conditions indicate that historical fuel contamination is present within the upper soil horizons.

Statement of Limitations

This report has been prepared in accordance with the agreement between Government Property NSW and Greencap.

Within the limitations of the agreed upon scope of services, this work has been undertaken and performed in a professional manner, in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by members of its profession and consulting practice. No other warranty, expressed or implied, is made.

This report is solely for the use of Government Property NSW and any reliance on this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties or for other uses. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Greencap.

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Table of Contents

1 INTRODUCTION

Greencap was engaged by Government Property NSW (GPNSW, the client) to undertake a detailed site investigation (DSI) at the property located at 45-61 Waterloo Road, Macquarie Park, NSW (the site). The site is indicated on Figure 1 at the rear of this report. The site as a whole is legally identified as comprising Lot 102 in Deposited Plan (DP) 1130630. Since the date of original report (Greencap, March 2015) the decision has been made to split the site into two sections. The proposed Lots (Proposed Lots 1 and 2) are indicated in Figure 1a.

The investigation area which is the subject of this report comprises Proposed Lot 1 in DP1130630 which comprises approximately 7,000m^2 and is indicated on Figure 1b. The remainder of the site (Proposed Lot 2) is detailed in a second report (Greencap 2015(2)).

The entire site (i.e. Lot 102) is planned for divestment and this report is to be included in the contract for sale.

We understand that Proposed Lot 2 is to be sold for commercial development and Proposed Lot 1 is to be granted to Council as part of the sale process.

The wider site (i.e. Lot 102) was previously owned by Sydney Water and was used as a construction depot. Following this in 2000, the Olympic Roads and Transport Authority used the site as a refuelling station. There was a tank farm at the site consisting of 12 underground storage tanks (see Figure 2 for approximate location). These tanks were removed in 2006 however no reports were made available to Greencap relating to the tank decommissioning and removal.

The site has been vacant for the past 5 years. Government Property NSW (formerly the State Property Authority) took possession of the site in 2010. In 2013 Greencap (then Greencap) undertook a preliminary site investigation (PSI) at the site as part of the divestment process (ref. J121797). The PSI identified the need for further investigation based on the likelihood for contamination to exist at the site due to the historical landuse.

Professional judgement has been used to extrapolate between investigated areas. However, due to the inherent variability of soil and contaminants, actual conditions may vary from those inferred to exist. The actual interface between materials and the variation in soil quality may be more abrupt or gradual than this report indicates.

Greencap notes that at the time the investigation was undertaken the site was considered as one Lot and the investigation was designed as such. At the Clients request the site (and as such the investigation) has been split into two separate sections, due to this, the investigation undertaken in Proposed Lot 1 may not comply with the minimum sampling density as per NSW EPA (1995) *Sampling Design Guidelines.*

Greencap is not responsible for changes to the report findings arising from changes in site conditions and/or soil and groundwater chemistry that have occurred since the time of the investigation.

This work has been carried out as per Greencap proposal J142067-Q dated December 2015 and emailed approval to proceed received from GPNSW.

2 PROJECT OBJECTIVES

The objective of the original investigation was to assess the site for sources of contamination which were flagged in the 2013 PESA report through undertaking a detailed phase 2 assessment as per the NSW EPA (1995) *Contaminated Sites: Sampling Design Guidelines* and the NSW OEH (2011) *Guidelines for Consultants Reporting on Contaminated Sites.*

The specific objective of this report is to detail the findings of the investigation locations within the boundaries of Proposed Lot 1.

3 PROJECT SCOPE

The proposed scope to cover the site was outlined in the document J130282-Q (Greencap 2014). The scope undertaken within the boundaries of Proposed Lot 1 comprised:

- Conducting a data review of the existing report relating to the tank removal and destruction carried out by JFTA Petrochemical Services.
- Preparation of safety documentation, Dial Before you Dig search and underground service clearance by a Telstra registered Locator, and application to the NSW Office of Water for a Groundwater Bore Licence (see Appendix A);
- Drilling a total of 15 soil boreholes (using a push tube system) and conversion of one of the bores to groundwater monitoring well (using solid flight augers);
- Collection of soil and water samples for submission to NATA accredited laboratories for a selection of relevant analyses (refer to Section 6 for details); and
- Preparation of this report.

3.1 Variations to the Scope

Greencap notes that the tank decommissioning report prepared by JFTA was not made available for the data review due to difficulties in obtaining the report from JFTA. The data review was not undertaken however during the site walkover prior to the drilling being undertaken it was clear where the remedial area had been due to the new hardstand surface which had been constructed. A number of the soil locations were therefore targeted in the approximate and assumed location of the tank farm (see Figure 2 and Figure 3).

3.2 Variations to Recommended Sampling Density

Greencap note that at the time that the original investigation was undertaken the number of sampling locations (50) was sufficient for a site of approximately 4 hectares. As the site is now being split into two sections the requirement for Proposed Lot 1 is that 17 sampling locations are undertaken across the site in order to comply with the NSW EPA (1995) *Sampling Density Guidelines* (minimum sampling locations recommended for a size 7,000m^2 in area).

We note that only 15 sampling locations have been undertaken in Proposed Lot 1, therefore the sampling density does not comply with the guidelines. Furthermore, only one groundwater well exists for Proposed Lot 1.

4 SITE CONDITION AND SURROUNDING ENVIRONMENT

The following sections are summarised from the Greencap 2013 PSI report (reference *Preliminary Environmental Site Assessment* Noel Arnold & Associates Pty Ltd November 2013 C107943:J131797). For full details please refer to this report.

4.1 Site Identification

The site is identified as a section of the Former Sydney Water Depot site, 45-61 Waterloo Road, Macquarie Park, NSW. Specific details are included in Table 1 and the site locality is indicated on Figure 1. We note that the investigation encompassed Proposed Lot 1 only (as indicated on Figure 1b).

Table 1: Site Identification

Item	Details
Site Address	45-61 Waterloo Road, Macquarie Park
Lot and Deposited Plan	Lot 102 DP1130630
Lot Size	~4 ha
Investigation Area	Proposed Lot 1
Size of investigation Area	7,000 m^2
Site Owner	Government Property NSW
Zoning	B3 – Commercial Core
Local Authority	City of Ryde
Parish and County	Parish of Hunters Hill, County of Cumberland
Locality and Site Map	Figure 1, Figure 1a, Figure 1b

4.2 Site Walkover

Prior to the drilling an initial site walkover was conducted to ensure that Greencap personnel were familiar with the site. The following observations were made:

- Proposed Lot 1 is situated within Lot 102 DP1130630 which is a large vacant site, rectangular in shape. A bus stop type shelter is present on Proposed Lot 1.
- Proposed Lot 1 is generally flat however slopes down gradually to the north-west (gradient of 0.03).
- Proposed Lot 1 is bound by Waterloo Road at the south-west and Proposed Lot 2 on all other sides. All fences surrounding Lot 102 appeared to be in good condition.
- Bitumen hardstand covered the majority of Proposed Lot 1. In the north-corner of the site was an area where the bitumen had been removed and the area was covered with roadbase gravel. No visible staining or other evidence of surface spills was observed across the site.

4.3 Regional Meteorology

The Bureau of Meteorology provides the following statistics for weather at the Macquarie Park (Willandra Village) Weather station (situated 1.8 km to the north-west of the site). Note that temperature observations were collected between 1971 and 1995 and rainfall observations between 1970 and 2015.

- Mean maximum temperatures range from 27.7°C in January to 17.1°C in July;
- Mean minimum temperatures range from 16.9°C in January to 4.9°C in July; and
- Annual average rainfall at the site over the observation period was 1142 mm, with the highest mean rainfall occurring in January (144.8 mm). Median rainfall for the site was recorded as 106 mm over the observation period.

The site is covered with hardstand (as is the majority of the surrounding area) indicating that the majority of the rainfall falling at the site will enter the storm-water system and is unlikely to percolate through to the subsurface of the site.

4.4 Geology Soil and Topography

A review of the Soil Landscapes Series Sheet 9130 Sydney 1:100,000 published by the NSW DECCW in 2009 (4th Ed.) indicates the soil is composed of the Glenorie erosional soil landscape group. The Glenorie soil landscape comprises shallow to moderately deep Red Podzolic soils (i.e. acid soils with strong texture contrast between A and B horizons) on crests, moderately deep Red and Brown Podzolic soils on upper slopes, and deep Yellow Podzolic soils on lower slopes. The landscape group has the potential for high soil erosion hazard with localised impermeable highly plastic subsoil.

The Sydney 1:100,000 Geological Series Sheet published by the Geological Survey of NSW Department of Mineral Resources in 1983 (1st Ed.) indicates that the geology underlying the site is the Ashfield Shale, which is a subgroup of the Wianamatta Group shales. The Wianamatta Group Shales are a Middle Triassic aged deposit.

The Ashfield shale is described as black to dark grey laminite and was formed in marine conditions.

Underlying the Wianamatta Group Shales is the Hawkesbury Sandstone, an alluvial deposit described as a medium to coarse grained quartz sandstone with minor shale and laminite lenses. The map indicates that the top of the Hawkesbury Sandstone (and therefore the base of the Wianamatta Group) in the area of the site is approximately 60 m (relative to sea level).

Site observations during the field investigation indicate that the soil at the site encountered in the shallow soil bores is consistent with the description of the Glenorie soil landscape and weathered horizons of the Ashfield Shale and the rock encountered at depth in the groundwater bores was consistent with the Ashfield Shale.

4.5 Hydrogeology

A search of the NSW Natural Resources Atlas was undertaken for groundwater bores within 500 metres of the site as part of the PSI report in November 2013. One bore within 500 metres was identified. The bore was installed for industrial purposes and drilled to a depth of 180 m with a standing water level of 108m; no further information was available for this bore. However given the depth indicates that the bore is drilled into the Hawkesbury Sandstone at a depth considerably greater than the study depth of this investigation further information (should it have been available) is unlikely to have any bearing on the outcomes of this investigation.

The Geological Survey of NSW indicates that abstraction bores for potable use are infrequently constructed on Wianamatta Group shales due to slow production rates and high salinity therefore groundwater at the site, if affected by contamination, is unlikely to have an impact on human

receptors. There are also no irrigation or recreational bores in the area. It should be noted that Shrimptons Creek is located approximately 650 metres to the north-west of the site and has the potential to be a receptor for contaminated groundwater from the greater catchment area.

Regionally in the Ashfield Shale groundwater is found between 5 to 10 metres below ground level (m BGL). This was confirmed during the groundwater sampling, with groundwater encountered during drilling at between 6 and 8 m BGL.

Regional groundwater is considered likely to flow north – north-west towards Shrimptons Creek, a tributary of the Lane Cove River.

5 SUMMARY OF SITE HISTORY

The following summary is taken from the November 2013 PSI report; please refer to this report for further detail.

Please note that the historical summary relates to the site as it is currently gazetted, e.g. Lot 102 in DP 1130630 and not specifically to Proposed Lot 1.

The site has been owned by various people over the past 100 years. From 1918 to 1945 a number of lay-people owned the site including farmers and spinsters, in 1945 a builder and his wife owned the land until 1963 at which point the Metropolitan Water and Sewerage Drainage Board took ownership until 1988. Over the course of the next 25 years, Sydney Water Corporation, State Rail Authority of NSW and Transport Infrastructure owned the site. In 2010 GPNSW (then the State Property Authority) took possession of the site.

A search was undertaken by Greencap on the 25th of September 2013 for the City of Ryde Local Government Area in relation to sites notified to the NSW EPA for contamination, and sites which have been issued with a Record of Notice of Contamination. There were no sites on record or NSW EPA-notified sites within one kilometre of the site.

A search of registered dangerous goods on the site carried out through WorkCover revealed that in 1967, the Metropolitan Water and Sewerage Drainage Board applied for a Dangerous Goods Licence to manage 12 underground fuel storage tanks on the site as part its use as a Construction Depot. In 2000 the Olympic Road and Transport Authority (ORTA) obtained an extension of a Dangerous Goods License to continue the refuelling use of the site. At the time, the site was leased to State Rail Authority for the Sydney 2000 Olympic Games as a staging and refuelling area for fleet cars.

The WorkCover search revealed that the 12 tanks were decommissioned in 2006 by JFTA Petrochemical Services. At the time this report was produced, there was no available documentation which discussed validation sampling of the soils around the tanks.

6 FIELD PROGRAM

Field work was carried out between the 29th January 2015 and the 3rd February 2015 by Naomi Price. Field logs from each bore location are included in Appendix B and contain a description of the material encountered, odours and staining encountered, and any other pertinent information.
All laboratory analysis was undertaken at our preferred laboratories. Soil and groundwater organic and inorganic analysis was undertaken by Australian Laboratory Services (ALS) and asbestos analysis was undertaken by Australian Safer Environments and Technologies (ASET). All laboratories are NATA accredited for the analyses undertaken.

6.1 Soil Investigation

The soil investigation was undertaken between the 29th January and 2nd February 2015. The investigation consisted of:

- A service clearance by a Telstra Registered service locator (Action Locating);
- Excavation of 15 soil boreholes to a maximum depth of 9 m BGL (investigation locations are shown on Figure 3). Locations were undertaken on both a grid basis (GW1, BH16-17, BH24-25, BH30-31, BH38) and a targeted basis around the former tank farm (BHA-BHG);
- Collection of soil samples and analysis for the following:
  - Total recoverable hydrocarbons (TRH);
  - BTEX (benzene, toluene, ethylbenzene and xylenes);
  - Polycyclic aromatic hydrocarbons (PAH);
  - Organochlorine pesticides (OCP);
  - Polychlorinated bibhenyls (PCB);
  - Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); and
  - Asbestos.

Soil samples were collected from the lining of the push tube. A new liner was used each time the drill rod was advanced through the soil profile. Samples were collected by hand and clean nitrile gloves were used at the collection of each sample. Soil samples were placed into labelled glass jars before being placed on ice in a cooler. Samples were transported to the laboratory under chain of custody procedures within the required holding times.

6.2 Site Observations

Fill material or reworked natural soils were generally encountered in all boreholes across the investigation area. All bores were terminated in natural material. Fill material depths are indicated on the field logs and discussed below.

Fill material generally consisted of clayey gravelly roadbase material, which generally extended to depths of approximately 0.5 - 0.7 m BGL. The deepest fill material was encountered in boreholes BH17 (2.1 m BGL), BHB (1.7 m BGL) and BH25 (1.6 m BGL).

Borehole BH25 was located at the east of the assumed tank remedial area (see Figure 2 and Figure 3), the fill material encountered was coarse grey sand with moderate hydrocarbon odour. It is assumed that this is a remnant of the backfill sands surrounding the tanks which were not removed during the remediation.

Borehole BHB was located within the assumed tank removal area. The fill material consisted of crushed sandstone and sand and had a faint reducing (hydrogen sulfide) odour. It is assumed that this fill was the backfill used to fill in the excavations following remediation.

Borehole BH17 was located in the centre of Proposed Lot 1 to the south of a large mounded garden bed. The material encountered was a reworked natural material consisting of soft clay with some roadbase present. This may be indicative of localised filling. There was no evidence of contamination (visual or olfactory) in the fill material.

In a number of locations (boreholes BHD, BHF) fill material consisting of loose roadbase gravel and clay was encountered overlying a layer of reworked natural clay. Beneath this was natural topsoil, overlying the weathered clay and shale observed in the other bores. This is indicative of localised landscaping having been undertaken at the site with site won material being placed over the natural material to form landscaped areas or to compensate for natural topographical differences.

Natural material was encountered in all boreholes and consisted of heavy red, orange and brown clays, ironstone, soft grey and red weathered shales and, in the groundwater bore, competent dark grey shale from 5 m BGL.

Visual evidence of contamination was observed in the following bores:

- Borehole BHG in the tank removal area which had a thin layer of brown and red clay with black stained ironstone. This was associated with a moderate hydrocarbon odour; and
- A faint sheen was observed on perched groundwater observed in borehole BH25.

The following olfactory observations were made during the investigation:

- BHA
  - Faint aged hydrocarbon odour 0.5-0.6 m BGL
  - Moderate to faint hydrocarbon odour 0.6 – 1.2 m BGL
- BHB
  - Very faint reducing odour 1.2-1.6 m BGL
- BHG
  - Moderate hydrocarbon odour 0.4-1.2 m BGL
  - Faint hydrocarbon odour 1.2-1.5 m BGL
  - Very faint hydrocarbon odour 1.5-2.1 m BGL
- BH22
  - Very faint reducing odour 0.8-1.2 m BGL
- BH25
  - Moderate hydrocarbon odour 0.6-1.7 m BGL

6.3 Groundwater Investigation

The groundwater investigation was undertaken in two stages. The drilling and well development was undertaken on the 29th January, sampling was undertaken on the 3rd February.

One groundwater monitoring well was drilled on Proposed Lot 1 under Monitoring Bore Licence 10BL605704 by Pat Tapper of Terratest Pty Ltd who holds a NSW Office of Water Class 1 Drilling Licence. The location of the groundwater bore can be found on Figure 3.

A copy of the Monitoring Bore licence can be found in Appendix A. The borelog can be found in Appendix B along with construction details.

Soil samples were collected from the groundwater bores during drilling; please refer to Section 4.1 for details. A groundwater sample was collected from each monitoring well and submitted to ALS for the following analysis:

- TRH and BTEX; and

- Heavy metals (as per Section 6.1 plus aluminium, manganese and iron).

Bore development was undertaken by removing in excess of four well volumes of standing water from each monitoring well using dedicated well tubing and a foot valve. Samples were collected using low flow sampling equipment. Dedicated consumable equipment was used at each well; any equipment reused between wells (such as the dipper and pumps) was decontaminated between each well using a triple rinse system (Decon90, followed by tap water, followed by deionised water). Samples were placed in appropriately preserved sample containers in a chilled cooler box before being transported to the laboratory under chain of custody procedures within the required holding times.

6.4 Site Observations

During drilling, the following observations regarding groundwater were noted:

- Slightly moist arisings at 5.0 m BGL.
- No other signs of groundwater encountered.

The standing water level in GW1 was recorded as being 48.095 m AHD. During purging it was noted that the recharge was very slow. The well was purged dry three times during development.

Sampling was undertaken using a low flow sampling system. Low flow purging was undertaken until the groundwater parameters had stabilised to the following criteria (adapted from EPA Victoria Publication 669):

- ± 10 % dissolved oxygen (DO)
- ± 3 % electrical conductivity (EC)
- ± 0.1 pH unit; and
- ± 10 mV Oxygen redox potential

The monitoring well stabilised after approximately 40 minutes of purging. The monitoring well was mainly slow to recharge therefore the pump controller was set to 1 -2 cycles per minute to prevent the water level in the well drawing down. The water level was monitored closely to prevent more than a 10% water column draw down. Field sheets from the sampling round are included in Appendix C.

No odour, sheen, or other visual sign of contamination was noted during sampling. The water was a turbid brown or grey colour which generally became slightly less so with continued purging. Samples were collected directly from the well tubing at the same rate as the sampling.

6.5 Groundwater Physical Characteristics

One water bearing zone was identified during drilling from approximately 5 m BGL. Standing water levels rose to shallower depths, indicating that the aquifer is confined within the shale layer at depths of greater than 5 m BGL. Perched water in the overlying clays was not noted during drilling.

Aquifer testing to determine the groundwater flow velocity was not undertaken as part of this investigation however typical hydraulic conductivity in tight shale formations such as the Wianamatta Shales is slow and generally ranges from 10-3 to 10-9 m/s (Freeze and Cherry 1979).

Field and laboratory measurements of physical characteristics indicate that the groundwater is slightly saline in GW1. Note that TDS has been calculated from the laboratory results using a conversion factor of 0.55. The pH of the groundwater was slightly acidic with laboratory pH results reporting a pH value of 6.02 pH units. The redox value was positive and dissolved oxygen levels were all elevated. Groundwater contours were not calculated as only one bore was located within Proposed Lot 1.

7 APPLICATION OF RELEVANT GUIDELINES

7.1 Soil Guidelines

The soil results were assessed according to criteria set out in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (2013 Amendment) (NEPM 1999).

The site is currently zoned as "B3- Commercial Core" under the City of Ryde Draft LEP 2010; therefore the results of the DSI have been assessed against criteria suitable for Commercial/Industrial land use.

The criteria are taken from:

- Health investigation levels for soil contaminants (Table 1A(1));
- Soil Health Screening Levels for vapour intrusion (Table 1A(3));
- Tables 1B(1, 2, 3, 4 and 5) Soil-specific added contaminant limits for:
  - aged zinc;
  - copper;
  - chromium III;
  - nickel;
  - lead; and
  - naphthalene, DDT and arsenic.
- Ecological screening levels for TRH fractions F1-F4, BTEX and Benzo(a)Pyrene in soil (Table 1B(6)); and
- Management Limits for TRH Fractions F1-F4 in soil.

Table 2: Soil Assessment Criteria – NEPM 1999 (2013 Amendment)

ANALYTE	CRITERIA (all units in mg/kg with the exception of asbestos)					
	Asbestos	Health investigation levels	Soil HSL for vapour intrusion[a]	Ecological investigation levels	Ecological screening levels	Management limits
Asbestos						
Asbestos	0.001%		-	-	-	-
Total recoverable hydrocarbons (mg/kg)						
C_6-C_{10} Fraction F1	-	-	310	-	215	800
>C_{10}-C_{16} Fraction F2	-	-	NL	-	170	1,000
>C_{16}-C_{34} Fraction F3	-	-	-	-	2,500	5,000
>C_{34}-C_{40} Fraction F4	-	-	-	-	6,600	10,000
Polyaromatic hydrocarbons						
BaP TEQ	-	40	-	-	-	-
BaP	-	-	-	-	0.7	
Naphthalene	-	-	NL	370	-	-
Total PAH	-	4,000	-	-	-	-
BTEX compounds						
Benzene	-	-	4	-	95	-
Toluene	-	-	NL	-	135	-
Ethylbenzene	-	-	NL	-	185	-
Xylene (total)	-	-	NL	-	95	-
Metals and metalloids						
Arsenic	-	3,000	-	160	-	-
Cadmium	-	900	-	-	-	-
Chromium	-	3,600	-	660	-	-
Copper	-	240,000	-	400[b]	-	-
Lead	-	1,500	-	1,800	-	-
Mercury	-	730	-	-	-	-
Nickel	-	6,000	-	55[c]	-	-
Zinc	-	400,000	-	360[d]	-	-
Organochlorine pesticides and Polychlorinated biphenyls						
DDT+DDE+DDD	-	3,600	-	640	-	-
Aldrin and	-	45	-	-	-	-

ANALYTE	CRITERIA (all units in mg/kg with the exception of asbestos)					
	Asbestos	Health investigation levels	Soil HSL for vapour intrusion[a]	Ecological investigation levels	Ecological screening levels	Management limits
dieldrin						
Chlordane	-	530	-	-	-	-
Endosulfan	-	2,000	-	-	-	-
Endrin	-	100	-	-	-	-
Heptachlor	-	50	-	-	-	-
HCB	-	80	-	-	-	-
Methoxychlor	-	2,500	-	-	-	-
PCBs	-	7	-	-	-	-

Notes:

a. Soil HSLs for clay soils at shallow depths (most conservative)
b. Aged copper criteria chosen for a slightly acidic soil with pH of 6.5, based on limited field screening
c. Aged nickel criteria chosen as most conservative displayed in NEPM 1999
d. Aged zinc criteria chosen for slightly acidic soil with pH of 6.5, based on limited field screening and most conservative CEC value

7.2 Groundwater Guidelines

The groundwater results were assessed according to groundwater investigation levels (GILs) and groundwater health screening levels for vapour intrusion (HSLs) presented in *National Environment Protection (Assessment of Site Contamination) Measure 1999* (2013 Amendment) (NEPM 1999).

Excluding the fill horizons in the bores (less than 0.5 m in the majority of the bores) material encountered during drilling consisted of heavy clays and shales. The well was installed with a screen section from 5 m BGL. The HSL considered most appropriate for assessment of potential vapour intrusion at the site is "HSL D Commercial/Industrial for Clay from 2m to 4m" in Table 1A(4) of the NEPM 1999.

The site is situated in an area which has an established commercial history and it is unlikely that there are any potable or recreational uses in the immediate area of the site. Therefore the GIL considered most relevant to this site are those protective of fresh water ecosystems presented in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000) and reproduced in the NEPM 1999.

The guidelines take into account trigger values for fresh and marine waters and provide level of percentage protection for specific analytes. The guidelines are given in Table 3 along with the groundwater results. In principle, groundwater is required to be of sufficient quality that it does not affect receiving waters, or that an aquifer is not degraded. Given this, waters encountered are of concern only in their potential to impact an off-site discharge zone. For protection of aquatic ecosystems the guidelines for 95% should be used. It is noted that these criteria relate to discharging waters and are conservative when applied to groundwater as dilution and attenuation effects could reduce contaminant levels substantially by the time the waters migrate and are discharged to the surface.

Table 3: Groundwater Assessment Criteria – NEPM 1999 (2013 Amendment)

Analyte	Assessment criteria (all values in µg/L)	
	Groundwater HSLs for vapour intrusion	Groundwater Investigation Levels – Fresh Waters
Toluene	NL	-
Ethylbenzene	NL	-
Xylenes	NL	-
Naphthalene	NL	-
Benzene	NL	-
C_6-C_{10} Fraction F1	NL	-
>C_{10}-C_{16} Fraction F2	NL	-
Aluminium	-	55
Arsenic	-	24
Cadmium	-	0.2
Chromium	-	1
Copper	-	1.4
Iron	-	-
Lead	-	3.4
Mercury	-	0.06
Nickel	-	11
Zinc	-	8

8 RESULTS AND DISCUSSION

8.1 Analytical Schedule

The number of samples for each analysis (soil and groundwater) is indicated in Table 4, along with the number of duplicate samples analysed. Laboratory transcripts are included in Appendix D. All discussion relating to quality assurance and quality control is included in Appendix E.

Table 4: Analytical Schedule

Analysis	Number Primary samples		Number duplicate samples	
	Soil	Water	Soil	Water
TRH	31	1	2	-
BTEX	31	1	2	-
PAH	31	-	2	-
OCP	31	-	2	-
PCB	31	-	2	-
Heavy metals	31	1	2	-
pH and EC	-	1	-	-
Asbestos	15	-	-	-

8.2 Soil Results

8.2.1 Inorganic Results

Results from all samples were below the adopted site criteria for inorganic analysis with respect to the Health Investigation Levels (HIL Commercial/Industrial D). Asbestos was not detected in any of the samples analysed.

However, nickel and aged zinc concentrations in a number of bores exceeded the EILs. The samples are indicated in Table 5.

It is noted that the selected EIL for nickel and zinc is based on soils with a CEC (Cation Exchange Capacity) of 5 cmlc/kg. A CEC test was outside the scope of this investigation therefore we have adopted the most conservative criteria presented in the NEPM 1999. The aged zinc criteria selected was also based on a soil pH of 6.5 (limited soil screening in the field indicated that pH ranged from 6.5 to 7 in the top 2m of soil).

It is unlikely that the site will have significant ecological receptors (shallow rooted plants and small biota) retained on-site as a result of the proposed redevelopment works. Therefore, the exceedances of the copper and zinc EILs are not considered to pose an undue risk to the site.

Table 5: Exceedances of EILs

Analyte	Nickel (mg/kg)	Zinc (mg/kg)
Criteria (EIL mg/kg)	55	360
Bore ID		
BHE 0-0.15	99	-
GW1 0.2-0.3	96	-
BH24 0-0.1	98	-
BH31 0-0.2	114	-
BH38 0.3-0.4	106	-
Note "-"denotes result did not exceed criteria despite having a detectable concentration. Refer to Appendix D for laboratory results.		

8.2.2 Organic Results

Concentrations of polychlorinated biphenyls and BTEX were below the laboratory reporting limits in all samples. Concentrations of organochlorine pesticides were below the laboratory reporting limits in all samples.

The concentrations of polycyclic aromatic hydrocarbons (PAH) were below the laboratory reporting limits in the majority of samples. Detectable concentrations of a number or PAHs were found in a small number of samples (refer to Table 6) in fill material however they either did not exceed the adopted criteria or there are currently no criteria for the compounds, with the exception of:

- Benzo(a)pyrene concentrations in three samples collected from the former tank farm area which exceeded the ESL for TRH fractions in soil:
  - BHG 0-0.2 {4.3 mg/kg}; and
  - BHB 0.2-0.4 {3.1 mg/kg}).

The occurrence of B(a)P in BHG and BHB samples is likely attributed to the bitumen and roadbase layer encountered (see borelogs in Appendix B).

In order to ascertain whether the source was bitumen, Greencap undertook a source analysis investigation (Mulvey and McKay 2006) whereby the samples were compared to a set of reference samples to assess the likely source of the PAH concentrations. The source analyser indicated that the types of PAH present in the soil are indicative of ash from coal tar and creosote. This indicates that the bitumen/road seal in the sample is affecting the results. This indicates that the B(a)P is likely to be bound strongly within a matrix of bitumen and is likely to be relatively immobile and not readily bioavailable.

Concentrations of total recoverable hydrocarbons in bands C_6-C_{10} and C_6-C_{10} minus BTEX (F1) and C_{34}-C_{40} (F4), were below the laboratory reporting limits in all samples with the exception of detectable concentrations in a number of samples (see Table 7) which were below the adopted criteria.

Concentrations of C_{10}-C_{16} (F2) exceeded the criteria in seven samples, and one sample contained a concentration C_{16}-C_{34} (F3) exceeding the criteria in the former tank farm area. Samples are indicated in Table 7. The samples which exceeded the criteria were all associated with faint to moderate hydrocarbon odours, and in the case of BH25 perched groundwater with a faint sheen noted. This indicates that there may be some residual material in this area which continues to be impacted from the historical tank farm.

Table 6: Polyaromatic hydrocarbon results

Bore ID / Analyte	Criteria	BHA 1-1.2	BHB 0.2-0.4	BHC 0-0.2	BHG 0-0.2	BHG 0.4-0.6	BHG 0.8-0.9	BHG 1.2-1.3
Naphthalene	5[3]	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Acenaphthylene	-	*ND*	0.8	*ND*	0.7	*ND*	*ND*	*ND*
Acenaphthene	-	*ND*	1.2	0.8	1.3	*ND*	*ND*	*ND*
Fluorene	-	*ND*	0.8	1	0.8	1.9	1.4	1.3
Phenanthrene	-	1.4	12.2	6.1	15.4	2.4	1.9	1.7
Anthracene	-	*ND*	2.4	1.3	3	*ND*	*ND*	*ND*
Fluoranthene	-	*ND*	11.4	5.8	15.8	*ND*	*ND*	*ND*
Pyrene	-	*ND*	11.1	5.6	14.7	*ND*	*ND*	*ND*
Benzo(a)anthracene	-	*ND*	3.4	1.7	4.7	*ND*	*ND*	*ND*
Chrysene	-	*ND*	3.3	1.7	4.7	*ND*	*ND*	*ND*
Benzo(b,k,j)fluoranthene	-	*ND*	4.8	1.9	5.6	*ND*	*ND*	*ND*
Benzo(a)pyrene	0.7[4]	*ND*	***3.1***	0.5	***4.3***	*ND*	*ND*	*ND*
Indeno(123cd)pyrene	-	*ND*	1.4	1.5	1.2	*ND*	*ND*	*ND*
Dibenz(ah)anthracene	-	*ND*	*ND*	0.7	*ND*	*ND*	*ND*	*ND*
Benzo(ghi)perylene	-	*ND*	2	*ND*	1.5	*ND*	*ND*	*ND*
BaP TEQ	40	ND	4.1	2	5.5	*ND*	*ND*	*ND*
Total PAH	4,000	1.4	57.9	29.5	73.7	4.3	3.3	3

Notes:

1. ***Bold underlined italicised*** text indicates criteria exceeded
2. ND – non detect
3. All values expressed in mg/kg
4. HSL soil vapour for samples 0-2m
5. ESL for TRH fractions in soil

Table 7: TRH sample results

Analyte	C_6 - C_{10} (F1)	$>C_{10}$-C_{16} (F2)	$>C_{16}$ - C_{34} (F3)	$>C_{34}$ - C_{40} (F4)
Criteria	215[a]/210[b]/*800*[c]	170[a]/NL[b]/*1,000*[c]	2,500[a]/*5,000*[c]	6,600[a] /*10,000*[c]
Bore ID				
BHA 0.5-0.6	*ND*	**380**	790	*ND*
BHA 1-1.2	14	**570**	550	*ND*
BHA 1.8-2	*ND*	<50	ND	*ND*
BHB 0.2-0.4	*ND*	<50	1,350	1,270
BHG 0-0.2	*ND*	60	1,300	1,520
BHG 0.4-0.6	*ND*	***1,640***	2,100	ND
BHG 0.8-0.9	19	***1,100***	890	*ND*
BHG 1.2-1.3	*ND*	**820**	880	*ND*
BHG 2.1-2.2	*ND*	150	240	*ND*
BH25 0.6-0.8	18	***2,080***	2,430	*ND*
BH25 1-1.2	17	***18,600***	***18,200***	100

Notes:

1. ESLs for TRH fractions
2. HSLs for soil vapour in samples less than 1m deep
3. Management limits
4. Criteria for this depth is NL (not limiting)
5. **Bold text** indicates exceedance of (a)
6. ***Bold Italicised underlined*** text indicates exceedance of (c)
7. All values expressed in mg/kg
8. ND indicates non detect

8.3 Groundwater Results

8.3.1 Inorganic Analysis

Groundwater heavy metal results are presented in Table 8. Concentrations of copper, nickel and zinc exceeded the adopted criteria. The exceedance of the criteria is likely attributed to elevated background concentrations of heavy metals in the groundwater. The Wianamatta Shales aquifer is a connate water source and is known for having naturally high background concentrations of heavy metals.

8.3.2 Organic Analysis

Concentrations of all organic analytes (TRH and BTEX) were below the laboratory reporting limits in all samples analysed.

Table 8: Inorganic groundwater results

Bore ID / Analyte	Criteria	GW1
pH		6.2
Aluminium	0.055	0.04
Arsenic	0.024	<0.001
Cadmium	0.0002	0.0001
Chromium	0.001	<0.001
Copper	0.0014	**0.029**
Nickel	0.011	**0.242**
Lead	0.0034	<0.001
Mercury	-	<0.01
Selenium	0.00006	<0.0001
Zinc	0.008	**0.289**
Iron	-	2.66

Notes:

a. All data expressed in mg/L
b. **Bold underlined** text indicates criteria exceeded

9 CONCLUSIONS

Greencap were engaged to undertake a detailed site investigation (DSI) at the site located at 45-61 Waterloo Road. The site was originally investigated as one whole site, however the site owner wishes to subdivide the site into two proposed Lots (see Figures 1, 1a and 1b). This report details the investigation locations undertaken in Proposed Lot 1, DP1130630. The site has been used for a variety of commercial purposes for the past few decades and at one stage had a tank farm containing 12 underground fuel tanks located in the centre of the site (located on Proposed Lot 1). This tank farm was decommissioned in 2006 and approximate locations are indicated on Figure 2.

Greencap undertook an investigation consisting of drilling 15 soil bores, conversion of one of these to a groundwater monitoring bore and submission of a range of samples to a NATA accredited laboratory for a selection of analytes.

Based on the results of this investigation we make the following conclusions:

- Fill material is present across the majority of the site, generally in the upper 0.5 m and consists of roadbase and clay fill. Deeper fill horizons were noted locally across the site, namely:
  - Sands and crushed sandstone in the vicinity of the former tank farm in the centre of the site. Assumed to be backfill sands which were not removed, as well as backfilled material following the remediation.

- Hydrocarbon odours ranging from faint to moderate were found in the upper two metres of bores BHA, BHB, BHG and BH25.
- A faint sheen on perched water was observed in borehole BH25.
- Some exceedances of the heavy metal Ecological Screening Levels were noted in the soil samples. It is likely that these concentrations are indicative of naturally occurring background concentrations within the residual clay soils. No remediation of this material is considered to be required.
- Concentrations of TRH in soil samples collected from boreholes BHA, BHB, BHG and BH25 exceed the ESLs (Ecological Screening Levels) and Management Limits. Soil material in this area does not comply with aesthetic requirements as per the NEPM 1999 (2013 amendment) as moderate hydrocarbon odours were noted. This material requires remediation and has been identified at a maximum depth of 2.1 m BGL in the locations investigated. The impacted sample locations are shown on Figure 4. We note that depths may exceed this in locations not investigated.
- Concentrations of BaP exceed the ESL criteria in samples BHB (0.2-0.4) and BHG (0-0.2).
- The groundwater sample collected from GW1 did not appear to be impacted by TRH or BTEX at the time of sampling, however it is noted that only one well exists on Proposed Lot 1. Heavy metal exceedances are attributed to naturally occurring background metals in waters sourced from the Wianamatta Shales.

10 RECOMMENDATIONS

Based on the results of this investigation Greencap make the following recommendations:

- Remediation is required at the site in order to remove the hydrocarbon impacted material in boreholes BHA, BHB, BHG and BH25. The impacted sample locations are provided on Figure 4.
  - This figure does not indicate a remedial area and is based on site observations during fieldwork and subsequent laboratory analysis. A remediation action plan including remedial volumes, areas and options should be prepared prior to the remediation taking place.
- Further groundwater investigation is warranted at the site due to the fact that only one bore is located within Proposed Lot 1 and soil conditions indicate that historical fuel contamination is present within the upper soil horizons.

Legend:

- Site Boundary

Metres
0 10 20 30 40

GREENCAP

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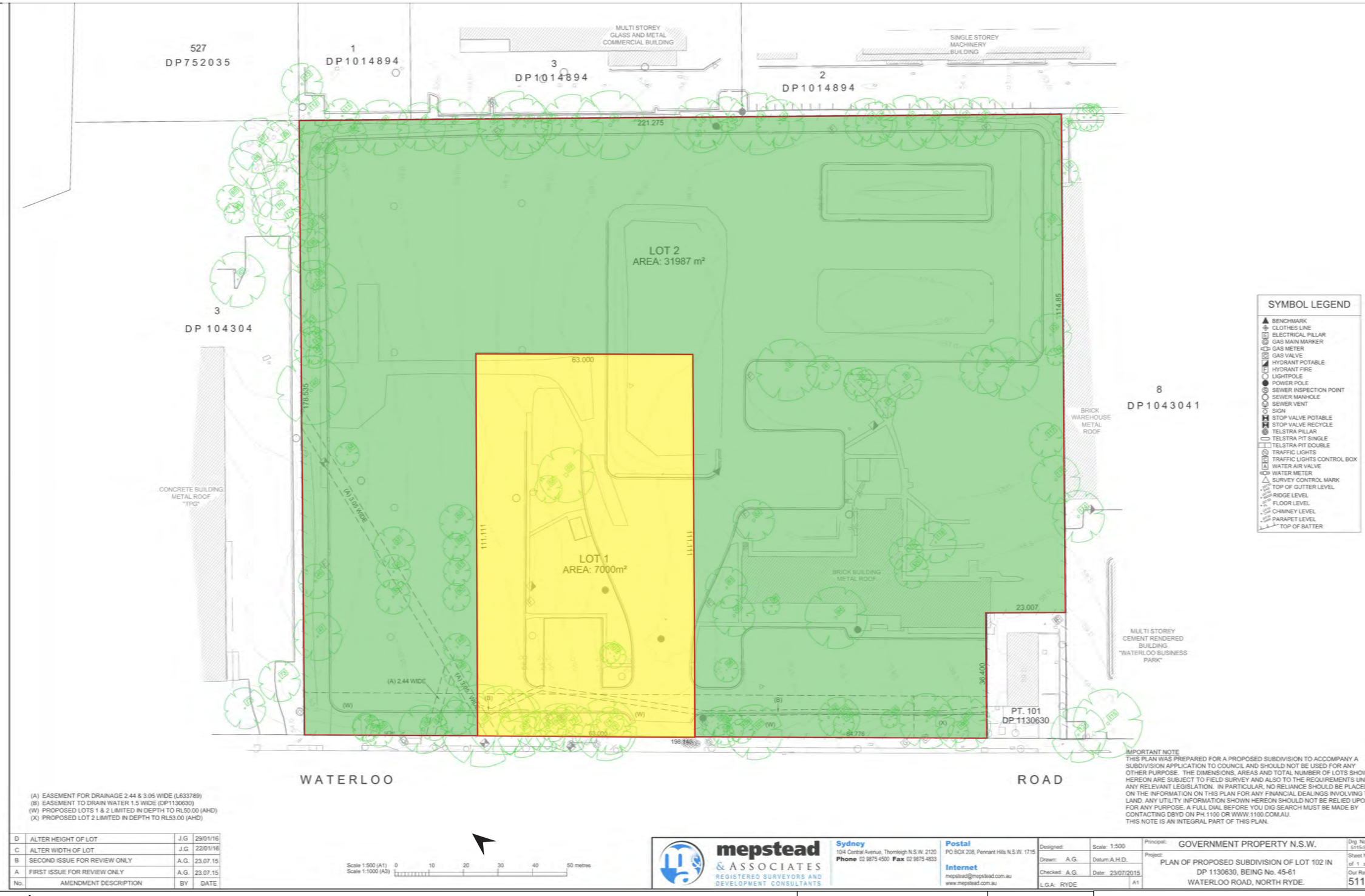
North Ryde, NSW 2113
Ph: 02-9889-1800
Fx: 02-9889-1811

Client Name:	Government Property NSW				
Client Number:	C107943	Project Number:	J142067		
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 1a	Site Location and Regional Context				



(A) EASEMENT FOR DRAINAGE 2.44 & 3.05 WIDE (L633789)
(B) EASEMENT TO DRAIN WATER 1.5 WIDE (DP1130630)
(W) PROPOSED LOTS 1 & 2 LIMITED IN DEPTH TO RL50.00 (AHD)
(X) PROPOSED LOT 2 LIMITED IN DEPTH TO RL53.00 (AHD)

No.	AMENDMENT DESCRIPTION	BY	DATE
D	ALTER HEIGHT OF LOT	J.G	29/01/16
C	ALTER WIDTH OF LOT	J.G	22/01/16
B	SECOND ISSUE FOR REVIEW ONLY	A.G.	23.07.15
A	FIRST ISSUE FOR REVIEW ONLY	A.G.	23.07.15

Scale 1:500 (A1) Scale 1:1000 (A3) 0 10 20 30 40 50 metres

IMPORTANT NOTE
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THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

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Designed:		Scale: 1:500	
Drawn: A.G.		Datum: A.H.D.	
Checked: A.G.		Date: 23/07/2015	
L.G.A: RYDE			A1

Principal: GOVERNMENT PROPERTY N.S.W.
Project: PLAN OF PROPOSED SUBDIVISION OF LOT 102 IN DP 1130630, BEING No. 45-61 WATERLOO ROAD, NORTH RYDE.
Drg. No. 5115-SUB1_B
Sheet No. 1 of 1 sheets
Our Ref: 5115

Legend:

- Proposed Lot 1 Boundary
- Proposed Lot 2 Boundary

GREENCAP
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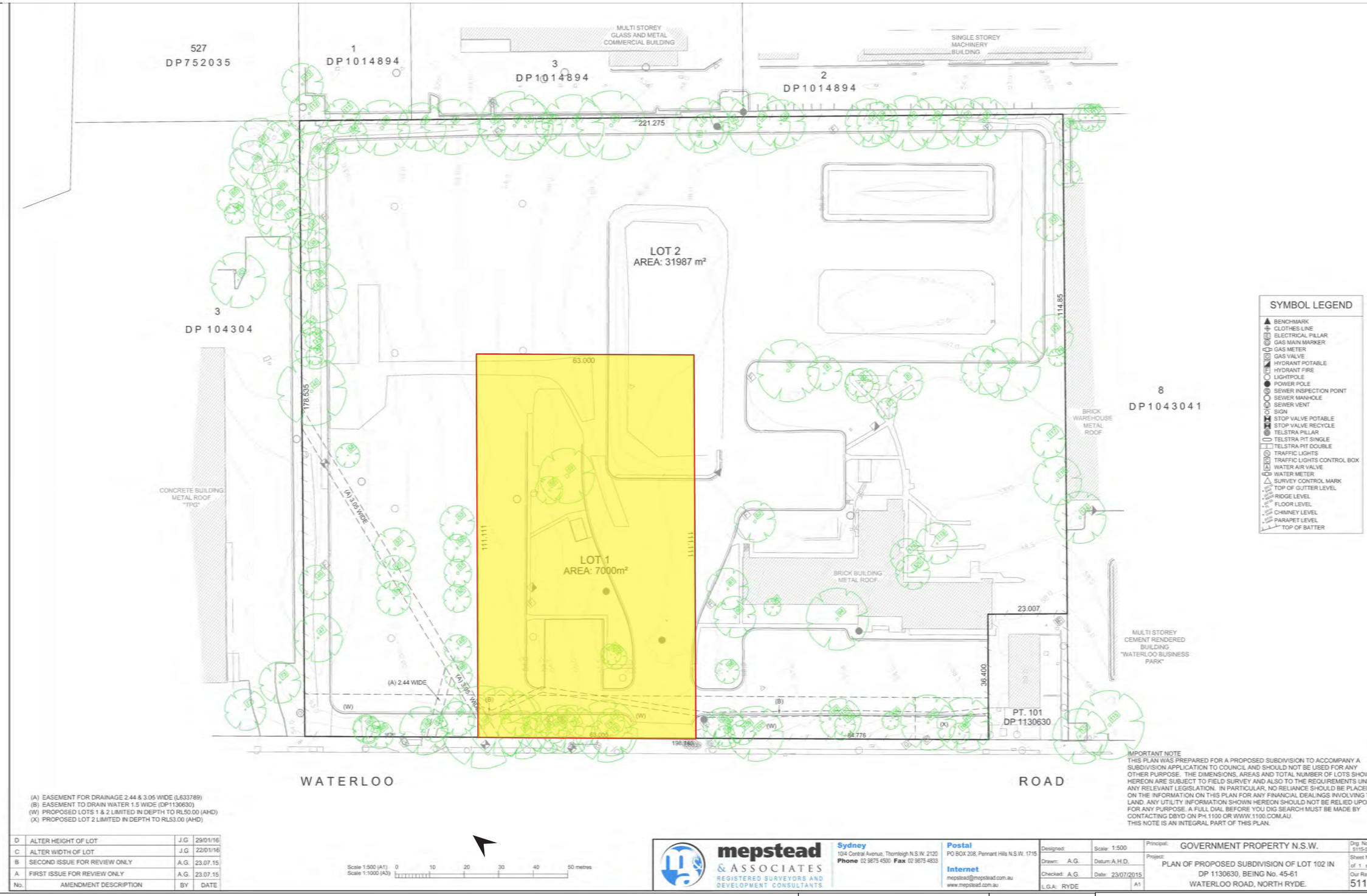
North Ryde, NSW 2113
Ph: 02-9889-1800
Fx: 02-9889-1811

Client Name:	Government Property NSW				
Client Number:	C107943	Project Number:	J142067		
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 1a	Proposed Lot Boundaries				



(A) EASEMENT FOR DRAINAGE 2.44 & 3.05 WIDE (L633789)
(B) EASEMENT TO DRAIN WATER 1.5 WIDE (DP1130630)
(W) PROPOSED LOTS 1 & 2 LIMITED IN DEPTH TO RL50.00 (AHD)
(X) PROPOSED LOT 2 LIMITED IN DEPTH TO RL53.00 (AHD)

No.	AMENDMENT DESCRIPTION	BY	DATE
D	ALTER HEIGHT OF LOT	J.G	29/01/16
C	ALTER WIDTH OF LOT	J.G	22/01/16
B	SECOND ISSUE FOR REVIEW ONLY	A.G.	23.07.15
A	FIRST ISSUE FOR REVIEW ONLY	A.G.	23.07.15

Scale 1:500 (A1) Scale 1:1000 (A3) 0 10 20 30 40 50 metres

SYMBOL LEGEND

- BENCHMARK
- CLOTHES LINE
- ELECTRICAL PILLAR
- GAS MAIN MARKER
- GAS METER
- GAS VALVE
- HYDRANT POTABLE
- HYDRANT FIRE
- LIGHTPOLE
- POWER POLE
- SEWER INSPECTION POINT
- SEWER MANHOLE
- SEWER VENT
- SIGN
- STOP VALVE POTABLE
- STOP VALVE RECYCLE
- TELSTRA PILLAR
- TELSTRA PIT SINGLE
- TELSTRA PIT DOUBLE
- TRAFFIC LIGHTS
- TRAFFIC LIGHTS CONTROL BOX
- WATER AIR VALVE
- WATER METER
- SURVEY CONTROL MARK
- TOP OF GUTTER LEVEL
- RIDGE LEVEL
- FLOOR LEVEL
- CHIMNEY LEVEL
- PARAPET LEVEL
- TOP OF BATTER

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Designed:		Scale: 1:500	
Drawn: A.G.		Datum: A.H.D.	
Checked: A.G.		Date: 23/07/2015	
L.G.A: RYDE			A1

Principal: GOVERNMENT PROPERTY N.S.W.
Project: PLAN OF PROPOSED SUBDIVISION OF LOT 102 IN DP 1130630, BEING No. 45-61 WATERLOO ROAD, NORTH RYDE.
Drg. No. 5115-SUB1_B
Sheet No. 1 of 1 sheets
Our Ref: 5115

Legend:

Site Boundary

GREENCAP
Level 2, 11-17 Khartoum Road
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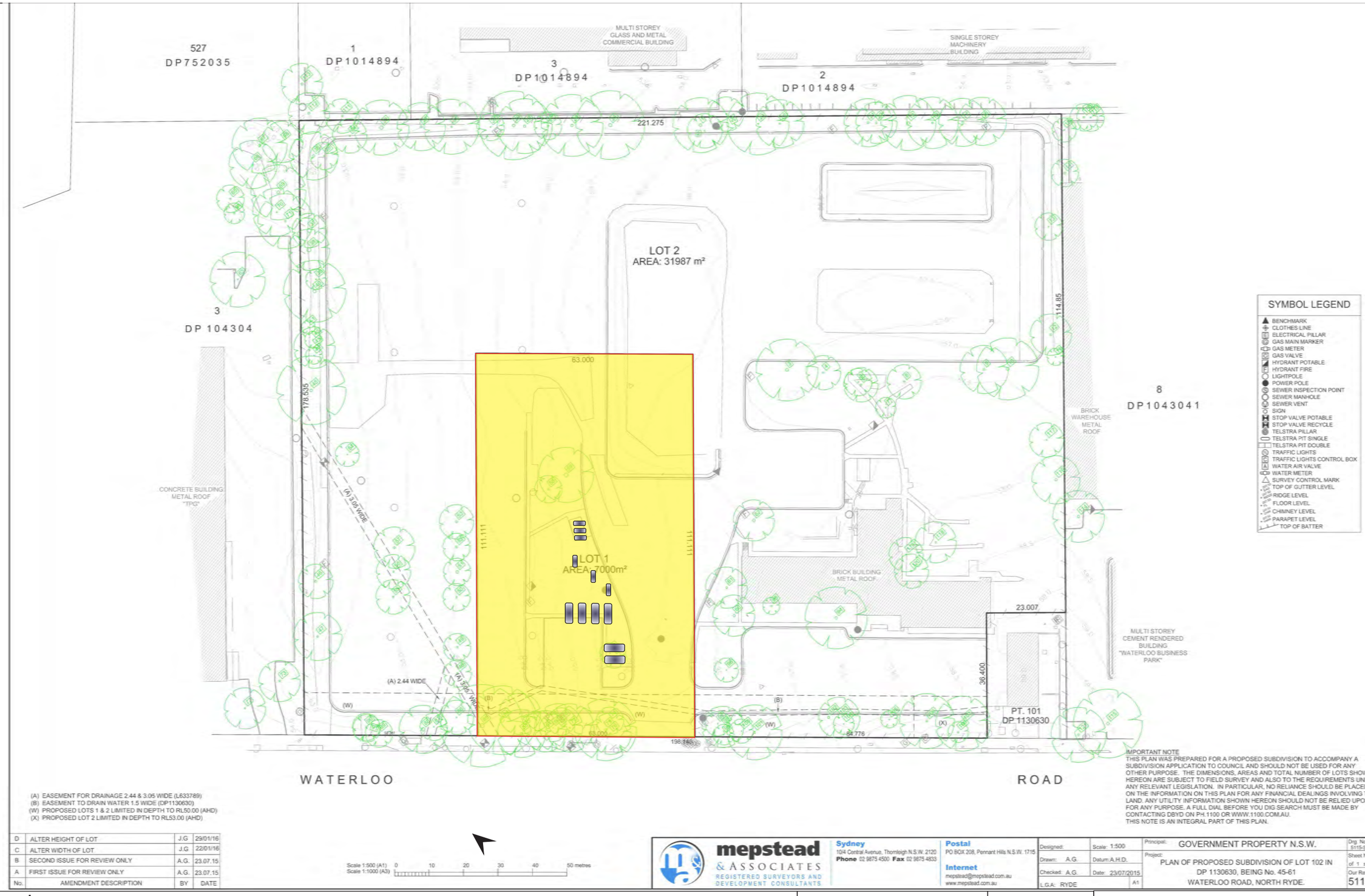
Client Name:	Government Property NSW				
Client Number:	C107943	Project Number:	J142067		
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 1b	Site Location - Proposed Lot 1				



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(W) PROPOSED LOTS 1 & 2 LIMITED IN DEPTH TO RL50.00 (AHD)
(X) PROPOSED LOT 2 LIMITED IN DEPTH TO RL53.00 (AHD)

No.	AMENDMENT DESCRIPTION	BY	DATE
D	ALTER HEIGHT OF LOT	J.G	29/01/16
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A	FIRST ISSUE FOR REVIEW ONLY	A.G.	23.07.15

Scale 1:500 (A1) Scale 1:1000 (A3) 0 10 20 30 40 50 metres

SYMBOL LEGEND

- BENCHMARK
- CLOTHES LINE
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- GAS MAIN MARKER
- GAS METER
- GAS VALVE
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- HYDRANT FIRE
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- SEWER MANHOLE
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Designed: Scale: 1:500
Drawn: A.G. Datum: A.H.D.
Checked: A.G. Date: 23/07/2015
L.G.A: RYDE A1

Principal: GOVERNMENT PROPERTY N.S.W.
Project: PLAN OF PROPOSED SUBDIVISION OF LOT 102 IN DP 1130630, BEING No. 45-61 WATERLOO ROAD, NORTH RYDE.
Drg. No. 5115-SUB1_B
Sheet No. 1 of 1 sheets
Our Ref: 5115

Legend:

- Site Boundary
- Approximate Historical Tank Location

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North Ryde, NSW 2113
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Client Name:	Government Property NSW				
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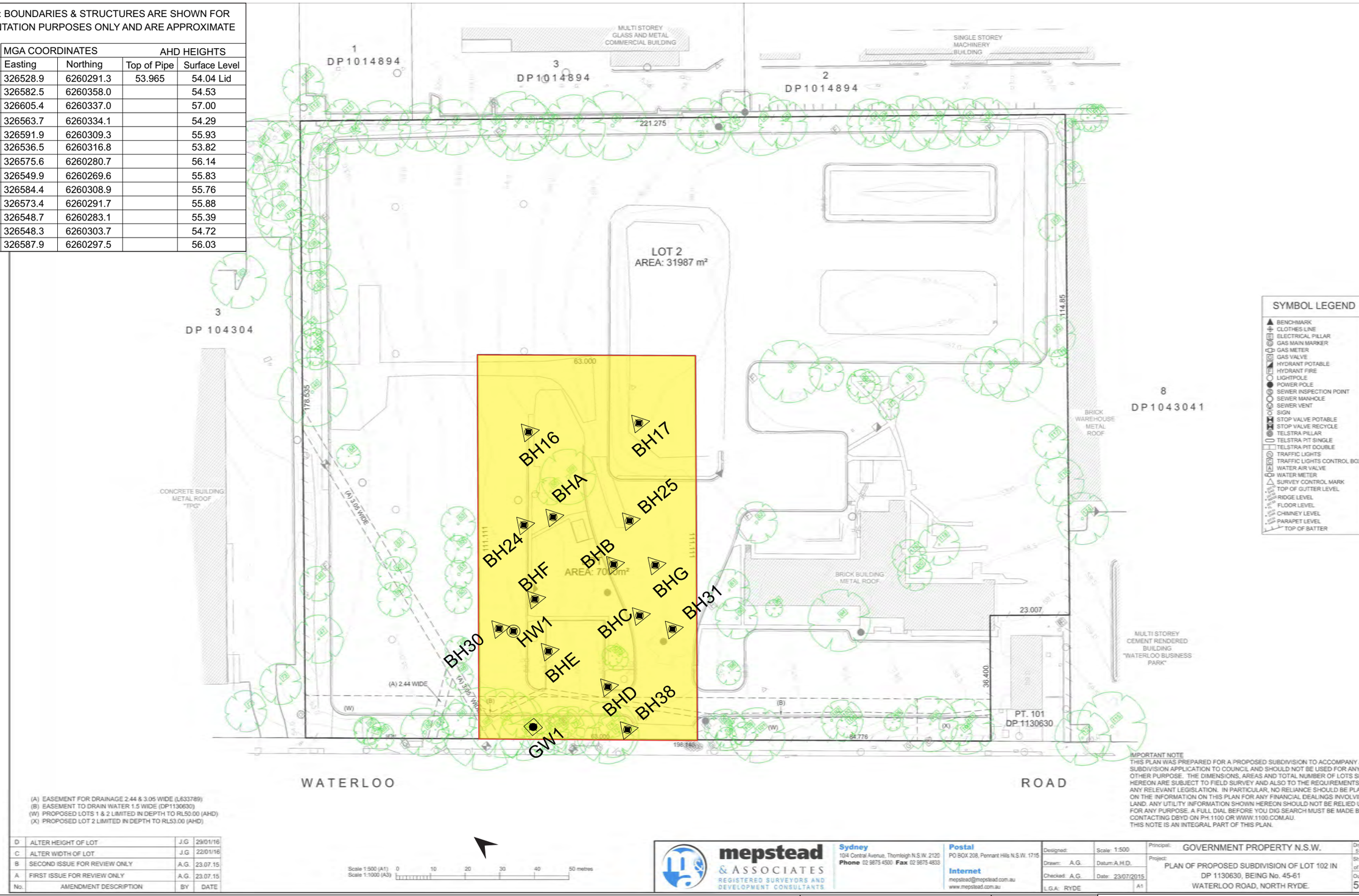
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 2	Assumed Historical Tank Locations - Proposed Lot 1				

NOTE: BOUNDARIES & STRUCTURES ARE SHOWN FOR ORIENTATION PURPOSES ONLY AND ARE APPROXIMATE

	MGA COORDINATES		AHD HEIGHTS	
Pt No.	Easting	Northing	Top of Pipe	Surface Level
GW1	326528.9	6260291.3	53.965	54.04 Lid
BH16	326582.5	6260358.0		54.53
BH17	326605.4	6260337.0		57.00
BH24	326563.7	6260334.1		54.29
BH25	326591.9	6260309.3		55.93
BH30	326536.5	6260316.8		53.82
BH31	326575.6	6260280.7		56.14
BH38	326549.9	6260269.6		55.83
BHA	326584.4	6260308.9		55.76
BHC	326573.4	6260291.7		55.88
BHD	326548.7	6260283.1		55.39
BHE	326548.3	6260303.7		54.72
BHG	326587.9	6260297.5		56.03



SYMBOL LEGEND

- BENCHMARK
- CLOTHES LINE
- ELECTRICAL PILLAR
- GAS MAIN MARKER
- GAS METER
- GAS VALVE
- HYDRANT POTABLE
- HYDRANT FIRE
- LIGHTPOLE
- POWER POLE
- SEWER INSPECTION POINT
- SEWER MANHOLE
- SEWER VENT
- SIGN
- STOP VALVE POTABLE
- STOP VALVE RECYCLE
- TELSTRA PILLAR
- TELSTRA PIT SINGLE
- TELSTRA PIT DOUBLE
- TRAFFIC LIGHTS
- TRAFFIC LIGHTS CONTROL BOIX
- WATER AIR VALVE
- WATER METER
- SURVEY CONTROL MARK
- TOP OF GUTTER LEVEL
- RIDGE LEVEL
- FLOOR LEVEL
- CHIMNEY LEVEL
- PARAPET LEVEL
- TOP OF BATTER

(A) EASEMENT FOR DRAINAGE 2.44 & 3.05 WIDE (L633789)
(B) EASEMENT TO DRAIN WATER 1.5 WIDE (DP1130630)
(W) PROPOSED LOTS 1 & 2 LIMITED IN DEPTH TO RL50.00 (AHD)
(X) PROPOSED LOT 2 LIMITED IN DEPTH TO RL53.00 (AHD)

No.	AMENDMENT DESCRIPTION	BY	DATE
D	ALTER HEIGHT OF LOT	J.G	29/01/16
C	ALTER WIDTH OF LOT	J.G	22/01/16
B	SECOND ISSUE FOR REVIEW ONLY	A.G.	23.07.15
A	FIRST ISSUE FOR REVIEW ONLY	A.G.	23.07.15

Scale 1:500 (A1) Scale 1:1000 (A3) 0 10 20 30 40 50 metres

IMPORTANT NOTE
THIS PLAN WAS PREPARED FOR A PROPOSED SUBDIVISION TO ACCOMPANY A SUBDIVISION APPLICATION TO COUNCIL AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. THE DIMENSIONS, AREAS AND TOTAL NUMBER OF LOTS SHOWN HEREON ARE SUBJECT TO FIELD SURVEY AND ALSO TO THE REQUIREMENTS UNDER ANY RELEVANT LEGISLATION. IN PARTICULAR, NO RELIANCE SHOULD BE PLACED ON THE INFORMATION ON THIS PLAN FOR ANY FINANCIAL DEALINGS INVOLVING THE LAND. ANY UTILITY INFORMATION SHOWN HEREON SHOULD NOT BE RELIED UPON FOR ANY PURPOSE. A FULL DIAL BEFORE YOU DIG SEARCH MUST BE MADE BY CONTACTING DBYD ON PH.1100 OR WWW.1100.COM.AU.
THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

mepstead & ASSOCIATES
REGISTERED SURVEYORS AND DEVELOPMENT CONSULTANTS
Sydney
104 Central Avenue, Thornleigh N.S.W. 2120
Phone 02 9875 4500 Fax 02 9875 4633
Postal
PO BOX 208, Pennant Hills N.S.W. 1715
Internet
mepstead@mepstead.com.au
www.mepstead.com.au

Designed:	Scale: 1:500	Principal:	GOVERNMENT PROPERTY N.S.W.
Drawn: A.G.	Datum: A.H.D.	Project:	PLAN OF PROPOSED SUBDIVISION OF LOT 102 IN DP 1130630, BEING No. 45-61 WATERLOO ROAD, NORTH RYDE.
Checked: A.G.	Date: 23/07/2015		
L.G.A: RYDE	A1		

Drg. No. 5115-SUB1_B
Sheet No. 1 of 1 sheets
Our Ref: 5115

Legend:

- Site Boundary
- Soil Borehole Location
- Groundwater Bore Location
- Historical Well

GREENCAP
Level 2, 11-17 Khartoum Road
North Ryde, NSW 2113
Ph: 02-9889-1800
Fx: 02-9889-1811

Client Name:	Government Property NSW				
Client Number:	C107943	Project Number:	J142067		
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 3	Borehole Locations - Proposed Lot 1				

NOTE: BOUNDARIES & STRUCTURES ARE SHOWN FOR ORIENTATION PURPOSES ONLY AND ARE APPROXIMATE

	MGA COORDINATES		AHD HEIGHTS	
Pt No.	Easting	Northing	Top of Pipe	Surface Level
GW1	326528.9	6260291.3	53.965	54.04 Lid
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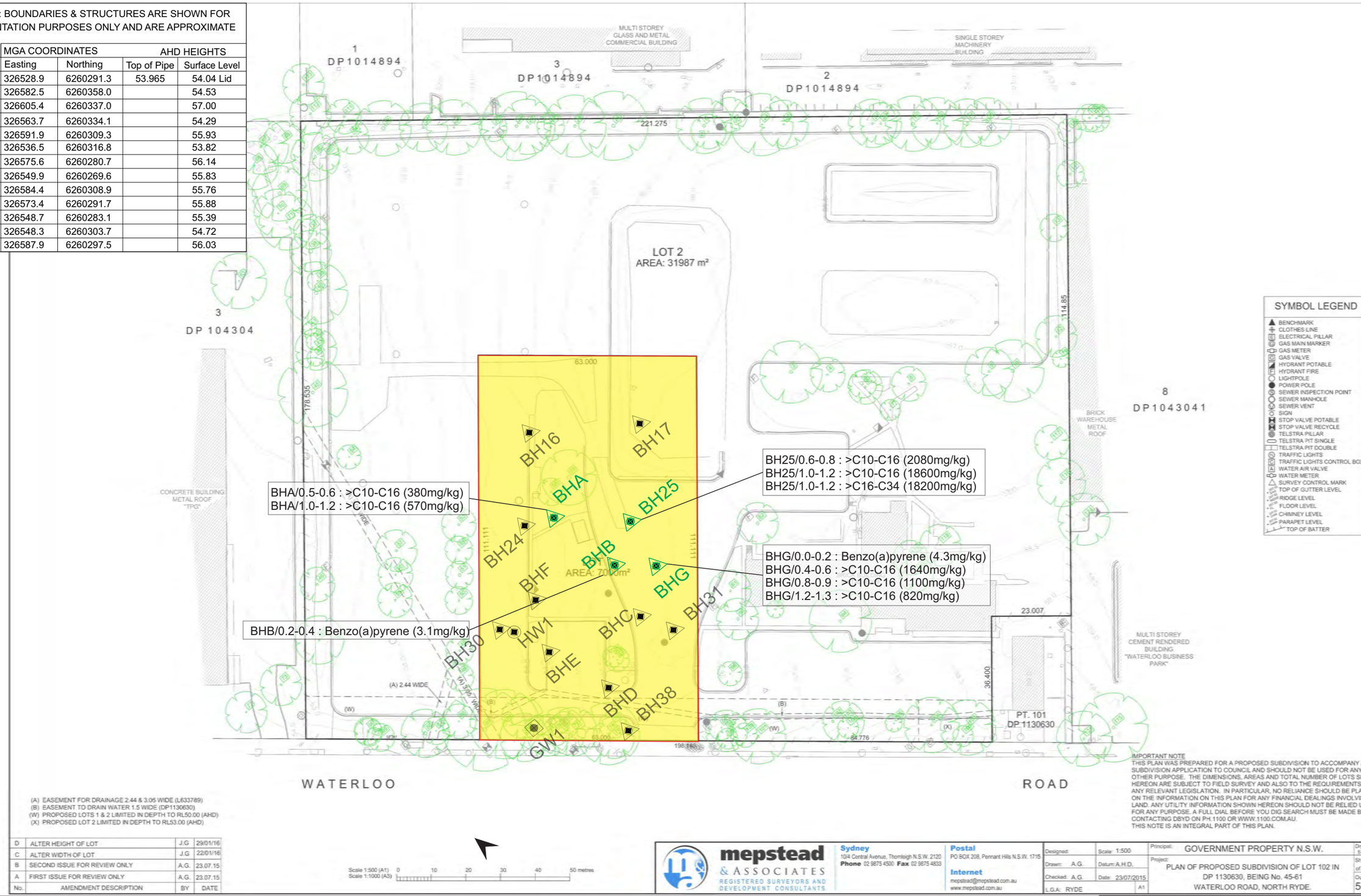
BHA	326584.4	6260308.9		55.76
BHC	326573.4	6260291.7		55.88
BHD	326548.7	6260283.1		55.39
BHE	326548.3	6260303.7		54.72
BHG	326587.9	6260297.5		56.03



SYMBOL LEGEND

- BENCHMARK
- CLOTHES LINE
- ELECTRICAL PILLAR
- GAS MAIN MARKER
- GAS METER
- GAS VALVE
- HYDRANT POTABLE
- HYDRANT FIRE
- LIGHTPOLE
- POWER POLE
- SEWER INSPECTION POINT
- SEWER MANHOLE
- SEWER VENT
- SIGN
- STOP VALVE POTABLE
- STOP VALVE RECYCLE
- TELSTRA PILLAR
- TELSTRA PIT SINGLE
- TELSTRA PIT DOUBLE
- TRAFFIC LIGHTS
- TRAFFIC LIGHTS CONTROL BOIX
- WATER AIR VALVE
- WATER METER
- SURVEY CONTROL MARK
- TOP OF GUTTER LEVEL
- RIDGE LEVEL
- FLOOR LEVEL
- CHIMNEY LEVEL
- PARAPET LEVEL
- TOP OF BATTER

(A) EASEMENT FOR DRAINAGE 2.44 & 3.05 WIDE (L633789)
(B) EASEMENT TO DRAIN WATER 1.5 WIDE (DP1130630)
(W) PROPOSED LOTS 1 & 2 LIMITED IN DEPTH TO RL50.00 (AHD)
(X) PROPOSED LOT 2 LIMITED IN DEPTH TO RL53.00 (AHD)

IMPORTANT NOTE
THIS PLAN WAS PREPARED FOR A PROPOSED SUBDIVISION TO ACCOMPANY A SUBDIVISION APPLICATION TO COUNCIL AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. THE DIMENSIONS, AREAS AND TOTAL NUMBER OF LOTS SHOWN HEREON ARE SUBJECT TO FIELD SURVEY AND ALSO TO THE REQUIREMENTS UNDER ANY RELEVANT LEGISLATION. IN PARTICULAR, NO RELIANCE SHOULD BE PLACED ON THE INFORMATION ON THIS PLAN FOR ANY FINANCIAL DEALINGS INVOLVING THE LAND. ANY UTILITY INFORMATION SHOWN HEREON SHOULD NOT BE RELIED UPON FOR ANY PURPOSE. A FULL DIAL BEFORE YOU DIG SEARCH MUST BE MADE BY CONTACTING DBYD ON PH.1100 OR WWW.1100.COM.AU.
THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

No.	AMENDMENT DESCRIPTION	BY	DATE
D	ALTER HEIGHT OF LOT	J.G	29/01/16
C	ALTER WIDTH OF LOT	J.G	22/01/16
B	SECOND ISSUE FOR REVIEW ONLY	A.G.	23.07.15
A	FIRST ISSUE FOR REVIEW ONLY	A.G.	23.07.15

Scale 1:500 (A1) Scale 1:1000 (A3) 0 10 20 30 40 50 metres

mepstead & ASSOCIATES
REGISTERED SURVEYORS AND DEVELOPMENT CONSULTANTS
Sydney 10/4 Central Avenue, Thornleigh N.S.W. 2120 Phone 02 9875 4500 Fax 02 9875 4533
Postal PO BOX 208, Pennant Hills N.S.W. 1715
Internet mepstead@mepstead.com.au www.mepstead.com.au

Designed: | Scale: 1:500 | Principal: GOVERNMENT PROPERTY N.S.W. | Drg. No. 5115-SUB1_B
Drawn: A.G. | Datum: A.H.D. | Project: PLAN OF PROPOSED SUBDIVISION OF LOT 102 IN DP 1130630, BEING No. 45-61 WATERLOO ROAD, NORTH RYDE. | Sheet No. 1 of 1 sheets
Checked: A.G. | Date: 23/07/2015 | A1 | Our Ref: 5115
L.G.A: RYDE

Legend:

- Site Boundary
- Soil Borehole Location
- Groundwater Bore Location
- Historical Well

GREENCAP
Level 2, 11-17 Khartoum Road
North Ryde, NSW 2113
Ph: 02-9889-1800
Fx: 02-9889-1811

Client Name:	Government Property NSW				
Client Number:	C107943	Project Number:	J142067		
Project Description:	Detailed Site Investigation				
Address:	45-61 Waterloo Road; Macquarie Park				
Prepared:	EL	Reviewed:	NP	Date:	09/02/2016
Figure 4	Borehole Exceedances - Proposed Lot 1				

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Appendix A: Borehole Licence

NSW GOVERNMENT | Department of Primary Industries
Office of Water

23 JAN 2015

form A's sent to driller 9/2/15

Contact Monique Brooking
Phone 02 4224 9746
Fax 02 4224 9740
Email Monique.Brooking@dpi.nsw.gov.au

Our ref 10BL605704

Government Property NSW
c/- Greencap NAA
Level 2, 11-17 Khartoum Road
NORTH RYDE NSW 2113

Attn: Naomi Price

Dear Ms Price

Monitoring Bore Licence
Lot 102 DP 1130630, 45-61 Waterloo Road, Macquarie Park 2113

Please find enclosed your licence. Your attention is drawn to the nature and description of the work, terms, limitations and conditions under which the licence is issued.

When engaging a bore driller, your responsibility is to:

- ensure that the works are drilled by a person who holds a current driller's licence issued by the NSW Office of Water Drillers are required to carry their licence with them. It is illegal for a driller to construct a bore without a driller's licence; and
- provide the driller with a copy of the groundwater licence and conditions sheets so that they are aware of any special construction requirements. The NSW Office of Water strongly advises that you obtain a written agreement (contract) from the driller for the work to be undertaken.

Condition (2) of the licence applies whether the bore is successful or not and it is the Driller's responsibility to supply the information. A copy of *'Form A – particulars of completed works'* is enclosed. As part of their licence requirements, **drillers must complete this form**.

You must send the completed *'Form A'*, together with any further information required in the licence conditions to the NSW Office of Water within two months of completion of the bore.

Your attention is drawn to conditions 11 and 12.

Drilling the bore and providing information

The NSW Office of Water recommends that the driller constructs the bore to the minimum requirements set out in guidelines developed by the National Groundwater Committee: *Minimum Construction Requirements for Water Bores in Australia.* (You can find a link to these guidelines under information on drillers' licences on our website at www.water.nsw.gov.au.)

More information

You can find more information on constructing a bore and water licensing on our website under *'Water Licensing'*. If you would like more information on your licence or on current water restrictions, contact a water licensing officer (details for water licensing enquiries are listed under *'Contact Us'* on the website) or phone 1800 353 104 or e-mail information@water.nsw.gov.au.

Yours sincerely

Monique Brooking
Water Regulation Cadet
21 January, 2015

NSW Office of Water

Sydney South Coast Region
Po Box 3720
10 Valentine Avenue
Parramatta NSW 2124
Phone: (02) 82817777

BORE LICENSE CERTIFICATE
UNDER SECTION 115 OF THE WATER ACT, 1912

10BL605704

Department of Primary Industries Office of Water

Government Property N S W
C/- Greencap N A A
Level 2, 11 Khartoum Road
North Ryde NSW 2113

LICENSE NUMBER
10BL605704
DATE LICENSE VALID FROM
21-Jan-2015
DATE LICENSE VALID TO
PERPETUITY
FEE
$0.00

ABN 47661556763 GST NIL

LOCATION OF WORKS

Portion(s) or Lot/Section/DP	PARISH	COUNTY
102//1130630	Hunters Hill	Cumberland

TYPE OF WORKS	PURPOSE(S) FOR WHICH WATER MAY BE USED
Bore	Monitoring Bore

CONDITIONS APPLYING TO THIS LICENSE ARE

As shown on the attached Condition Statement

ORIGINAL

NSW Office of Water

CONDITIONS STATEMENT REFERRED TO ON 10BL605704 ISSUED UNDER PART V OF THE WATER ACT, 1912 ON 21-Jan-2015

(1) THE LICENCE SHALL LAPSE IF THE WORK IS NOT COMMENCED AND COMPLETED WITHIN THREE YEARS OF THE DATE OF THE ISSUE OF THE LICENCE.

(2) THE LICENSEE SHALL WITHIN TWO MONTHS OF COMPLETION OR AFTER THE ISSUE OF THE LICENSE IF THE WORK IS EXISTING, FURNISH TO NSW OFFICE OF WATER:-

(A) DETAILS OF THE WORK SET OUT IN THE ATTACHED FORM "A" (MUST BE COMPLETED BY A DRILLER).

(B) A PLAN SHOWING ACCURATELY THE LOCATION OF THE WORK, IN RELATION TO PORTION AND PROPERTY BOUNDARIES.

(C) A ONE LITRE WATER SAMPLE FOR ALL LICENCES OTHER THAN THOSE FOR STOCK, DOMESTIC, TEST BORES AND FARMING PURPOSES.

(D) DETAILS OF ANY WATER ANALYSIS AND/OR PUMPING TESTS.

(3) THE LICENSEE SHALL ALLOW NSW OFFICE OF WATER OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT INSPECTION OR TEST OF THE WORKS AND ITS FITTINGS AND SHALL CARRY OUT ANY WORK OR ALTERATIONS DEEMED NECESSARY BY THE DEPARTMENT FOR THE PROTECTION AND PROPER MAINTENANCE OF THE WORKS, OR THE CONTROL OF THE WATER EXTRACTED AND FOR THE PROTECTION OF THE QUALITY AND THE PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER.

(4) IF DURING THE CONSTRUCTION OF THE WORK, SALINE OR POLLUTED WATER IS ENCOUNTERED ABOVE THE PRODUCING AQUIFER, SUCH WATER SHALL BE SEALED OFF BY:-

(A) INSERTING THE APPROPRIATE LENGTH(S) OF CASING TO A DEPTH SUFFICIENT TO EXCLUDE THE SALINE OR POLLUTED WATER FROM THE WORK.

(B) CEMENTING BETWEEN THE CASING(S) AND THE WALLS OF THE BORE HOLE FROM THE BOTTOM OF THE CASING TO GROUND LEVEL.

ANY DEPARTURE FROM THESE PROCEDURES MUST BE APPROVED BY THE DEPARTMENT BEFORE UNDERTAKING THE WORK.

(5) (A) THE LICENSEE SHALL NOTIFY NSW OFFICE OF WATER IF A FLOWING SUPPLY OF WATER IS OBTAINED. THE BORE SHALL THEN BE LINED WITH CASING AND CEMENTED AND A SUITABLE CLOSING GEAR SHALL BE ATTACHED TO THE BOREHEAD AS SPECIFIED BY NSW OFFICE OF WATER.

(B) IF A FLOWING SUPPLY OF WATER IS OBTAINED FROM THE WORK, THE LICENSEE SHALL ONLY DISTRIBUTE WATER FROM THE BORE HEAD BY A SYSTEM OF PIPE LINES AND SHALL NOT DISTRIBUTE IT IN DRAINS, NATURAL OR ARTIFICIAL CHANNELS OR DEPRESSIONS.

(6) IF A WORK IS ABANDONED AT ANY TIME THE LICENSEE SHALL NOTIFY NSW OFFICE OF WATER THAT THE WORK HAS BEEN ABANDONED AND SEAL OFF THE AQUIFER BY:-

(A) BACKFILLING THE WORK TO GROUND LEVEL WITH CLAY OR CEMENT AFTER WITHDRAWING THE CASING (LINING); OR

(B) SUCH METHODS AS AGREED TO OR DIRECTED BY NSW OFFICE OF WATER.

(7) THE LICENSEE SHALL NOT ALLOW ANY TAILWATER/DRAINAGE TO DISCHARGE INTO OR ONTO:-

- ANY ADJOINING PUBLIC OR CROWN ROAD;
- ANY OTHER PERSONS LAND;
- ANY CROWN LAND;
- ANY RIVER, CREEK OR WATERCOURSE;
- ANY NATIVE VEGETATION AS DESCRIBED UNDER THE NATIVE VEGETATION CONSERVATION ACT 1997;
- ANY WETLANDS OF ENVIRONMENTAL SIGNIFICANCE.

(8) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER TAKEN BY MEANS OF THE LICENSED WORK SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE REASONABLE PASSAGE OF FLOOD WATERS FLOWING INTO OR FROM A RIVER.

(9) IF THE BORE AUTHORISED BY THIS LICENSE IS LINED WITH STEEL OR PLASTIC CASING THE INSIDE DIAMETER OF THAT CASING SHALL NOT EXCEED 220 MM.

(10) WATER SHALL NOT BE PUMPED FROM THE BORE AUTHORISED BY THIS LICENSE FOR ANY PURPOSE OTHER THAN GROUNDWATER INVESTIGATION.

(11) SUBJECT TO CONDITION (12) THE LICENSEE SHALL WITHIN TWO MONTHS OF THE DATE OF COMPLETION OF THE BORE AUTHORISED BY THE LICENSE,

(1) BACKFILL IT WITH CLAY OR CEMENT TO GROUND LEVEL, AFTER WITHDRAWING ANY CASING(LINING), OR:-
(2) RENDER IT INEFFECTIVE BY ANY OTHER MEANS ACCEPTABLE TO THE DEPARTMENT.

(12) CONDITION (11) SHALL HAVE NO FORCE OR EFFECT IF:-

(1) AT THE RELEVANT TIME THERE IS WITH NSW OFFICE OF WATER, AN APPLICATION IN RESPECT OF WHICH THE DEPARTMENT HAS NOT MADE A DECISION TO CONVERT THE GROUNDWATER INVESTIGATION BORE INTO A PRODUCTION BORE; OR
(2) THE LICENSEE HAS COMPLETED THE BORE FOR THE PURPOSE OF MEASURING WATER LEVELS OR WATER QUALITY BY THE ADDITION OF CASING WITH A DIAMETER NOT EXCEEDING 220MM.

End Of Conditions

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Appendix B: Borehole Logs

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHA

Project No: J130282 **Date:** 2/02/2015
Project Name: Waterloo Road **Total Depth:** 2.2
Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered
Client: Government Property NSW **Logged by:** Naomi Price
Project Manager: Naomi Price **Approved by:** Jonathon Hilliard
Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Bitumen					DM	No odour
		Fill: Loose black/brown sandy gravel sized fragments of bitumen, roadbase and mixed lithologies						
0.5		Natural: Firm orange and brown CLAY	BHA 0.5-0.6		1	-	DM	Faint aged hydrocarbon odour
								Moderate to faint hydrocabon odour
		IRONSTONE						
1.0		Firm orange and brown CLAY	BHA 1-1.2	FD3	65.6	-	DM	
		Firm grey and red CLAY and soft grey SHALE						No odour
1.5								
			BHA 1.8-1.9		0	-	DM	
2.0								
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log in for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHB

Project No: J130282 **Date:** 2/02/2015
Project Name: Waterloo Road **Total Depth:** 3.2
Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered
Client: Government Property NSW **Logged by:** Naomi Price
Project Manager: Naomi Price **Approved by:** Jonathon Hilliard
Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
0.0		Bitumen						No odour
		Fill: Loose black sandy gravel sized fragments of roadbase and bitumen, pockets of soft clay throughout	BHB 0.2-0.4		0.1	-	DM	
0.5								
		White crushed sandstone and roadbase, coarse grey sand, yellow coarse and crushed yellow sandstone, blacl plastic sheeting and small wire fragments						
1.0			BHB 1.2-1.4		2.8	-	DM	Very faint reducing odour
1.5								No odour
		Natural: Firm grey and red CLAY						
2.0			BHB 2-2.2		0	-	DM	
		IRONSTONE						
		Soft grey and red CLAY						
2.5								
		Soft brown WEATHERED SHALE						
3.0								
		End of borehole at target depth in natural soil						
3.5								
4.0								

Note: This log in for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHC

Project No: J130282 **Date:** 2/02/2015

Project Name: Waterloo Road **Total Depth:** 2.2

Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered

Client: Government Property NSW **Logged by:** Naomi Price

Project Manager: Naomi Price **Approved by:** Jonathon Hilliard

Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Bitumen	BHC 0-0.2		0.1	-	DM	No visual or olfactory evidence of contamination throughout profile
		Fill: Loose black gravel sized fragments of roadbase and bitumen						
0.5		Natural: Stiff orange and grey CLAY	BHC 0.4-0.5		0	-	DM	
1.0					0	-	DM	
		Becoming red						
1.5								
		Soft red and grey WEATHERED SHALE						
2.0								
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube

Drilled by: Terratest

Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHD

Project No: J130282 **Date:** 2/02/2015

Project Name: Waterloo Road **Total Depth:** 2.2

Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered

Client: Government Property NSW **Logged by:** Naomi Price

Project Manager: Naomi Price **Approved by:** Jonathon Hilliard

Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Bitumen						
		Fill: Loose grey sandy gravel sized fragments of bitumen and roadbase			0	-	DM	No visual or olfactory evidence of contamination throughout profile
			BHD 0.3-0.4		0	-	DM	
0.5		Reworked Natural: Firm orange and brown CLAY						
		Natural: Soft brown LOAMY CLAY (topsoil)	BHD 0.7-0.8		0	-	DM	
1.0		Stiff red and brown CLAY with ironstone nodules						
1.5		Soft grey and red WEATHERED SHALE and soft grey CLAY						
2.0								
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube

Drilled by: Terratest

Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHE

Project No: J130282 **Date:** 2/02/2015

Project Name: Waterloo Road **Total Depth:** 2.2

Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered

Client: Government Property NSW **Logged by:** Naomi Price

Project Manager: Naomi Price **Approved by:** Jonathon Hilliard

Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Bitumen	BHE 0-0.15		0	-	DM	No visual or olfactory evidence of contamination throughout profile
		Fill: Loose grey gravel sized fragments of roadbase and bitumen	BHE 0.2-0.3		0	-	DM	
0.5		Reworked natural: Soft brown CLAY, roots throughout						
		Natural: Firm orange and brown CLAY						
1.0								
		Firm grey and red CLAY with ironstone nodules			0	-	DM	
1.5								
2.0					0	-	DM	
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log in for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube

Drilled by: Terratest

Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHF

Project No: J130282 **Date:** 2/02/2015

Project Name: Waterloo Road **Total Depth:** 2.2

Location: 43-61 Waterloo Road, Macquarie Park **Groundwater:** None encountered

Client: Government Property NSW **Logged by:** Naomi Price

Project Manager: Naomi Price **Approved by:** Jonathon Hilliard

Type: Borehole

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Reworked natural: Grass over soft brown CLAY LOAM (topsoil)			0	-	DM	No visual or olfactory evidence of contamination noted throughout profile
		Reworked natural: Firm red and brown CLAY						
0.5		Natural: Soft brown CLAY (topsoil)	BHF 0.5-0.6		0	-	DM	
		Firm red and brown CLAY with ironstone nodules						
1.0					0	-	DM	
		Becoming grey and red						
1.5					0	-	DM	
					0	-		
2.0								
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log in for environmental purposes only and is not intended for geotechnical use

Drill Method: Push tube

Drilled by: Terratest

Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BHG

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 2/02/2015
Total Depth: 2.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Fill: Bitumen	BHG 0-0.2		0.6	-	DM	No odour
		Fill: Loose grey and black gravel sized fragments of roadbase and bitumen						
0.5		Natural: Firm brown and red CLAY and ironstone (ironstone stained black)	BHG 0.4-0.6	FD4	5	-	DM	Moderate hydrocarbon odour
		Firm brown, grey and red CLAY						
1.0			BHG 0.8-0.9		10.5	-	DM	
					0	-	DM	Faint hydrocarbon odour
1.5		Soft grey and red WEATHERED SHALE						Very faint hydrocarbon odour
2.0					0	-	DM	
								No odour
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde
NSW 2113
P: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH1/GW1

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Date: 29/01/2015

Elevation: 0
Total Depth: 9
Groundwater: 5 m
Logged by: Naomi Price
Approved by: Jonathon Hilliard
Type: Borehole

SUBSURFACE PROFILE			SAMPLE						
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Well details	Comments
		Fill: Bitumen					DM	Roadbox	No visual or olfactory evidence of contamination noted throughout profile.
		Fill: Loose black sandy gravel sized fragments of roadbase	GW1 0.2-0.3		0	-	DM		
		Firm brown slightly gravelly clay	GW1 0.4-0.5		0	-	DM		
		Natural: Soft to firm brown and red mottled CLAY and soft grey SHALE			0	-	DM		
1.00		Firm red, brown and grey mottled CLAY and soft grey SHALE			0	-	DM		Groundwater was not encountered during drilling, however arisings slightly moist at 5 metres
		Becoming red and grey							
2.00		Soft red and grey SHALE							
			GW1 2.6-2.7		0	-	DM		
3.00		Soft grey SHALE			0	-	DM	Concrete grout	
		Soft pink SHALE with bands of ironstone			0	-	DM	Bentonite	
4.00									
		Soft brown SHALE			0	-	DM	Silca Sand	
5.00		Firm to hard grey SHALE			0	-	M		
		Hard grey SHALE			0	-	DM	Slotted Screen	Pushtube refusal change to augers
6.00									

Note: This log is for environmental purposes only and is not intended forgeotechnical use

Drill Method: Pushtube/SFA
Drilled by: Terratest
Sheet: 1 of 2

GreencapNAA
2/11 Khartoum Road
North Ryde
NSW 2113
P: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH1/GW1

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Date: 29/01/2015

Elevation: 0
Total Depth: 9
Groundwater: 5 m
Logged by: Naomi Price
Approved by: Jonathon Hilliard
Type: Borehole

SUBSURFACE PROFILE			SAMPLE						
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Well details	Comments
7.00		Hard grey SHALE			0	-	DM	Slotted Screen	
8.00									
9.00		End of borehole at target depth							
10.00									
11.00									
12.00									

Note: This log is for environmental purposes only and is not intended forgeotechnical use

Drill Method: Pushtube/SFA
Drilled by: Terratest
Sheet: 2 of 2

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH16

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 2.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
0		Fill: Bitumen			0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
		Fill: Loose grey subangular medium gravel sized fragments of roadbase and sandstone						
0.5		Firm brown clay						
		Reworked natural: Soft dark brown CLAY	BH16 0.6-0.8		0	-	DM	
1.0					0	-	DM	
		Natural: Firm brown and red CLAY with ironstone banding throughout	BH16 1.4-1.6		0	-	DM	
1.5								
2.0		Becoming white and red						
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH17

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 4.2
Groundwater: Perched 2.4 m
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Fill: Bitumen			0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
0.5		Fill: Dark grey and brown sandy subangular medium gravel sized fragments of roadbase			0	-	DM	
1.0		Firm red and yellow mottled clay			0	-	DM	
1.5		Soft brown clay with occasional (<10%) medium gravel sized fragments of roadbase	BH17 1.5-1.6		0	-	M	
2.0		Natural: Firm red and orange CLAY with bands of ironstone throughout			0	-	DM	
			BH17 2.2-2.4		0	-	M	
2.5					0	-	S	
3.0		Stiff grey WEATHERED SHALE			0	-	DM	
3.5								
4.0		End of borehole at target depth in natural soil						
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH24

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 2.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Fill: Bitumen	BH24 0-0.1		0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
		Fill: Loose grey subangular medium gravell sized fragments of roadbase						
0.5		Reworked Natural: Soft brown sandy CLAY	BH24 0.4-0.6		0	-	M	
		Natural: Firm red and brown CLAY and ironstone bands						
1.0					0	-	DM	
1.5								
		Becoming white and red						
2.0							DM	
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH25

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 2.2
Groundwater: 0.9-1.5m
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Fill: Bitumen					DM	No visual or olfactory evidence of contamination
0.5		Fill: Loose Brown gravelly clay. Gravel is subangular, medium of roadbase						
		Coarse grey sand	BH25 0.6-0.8		28.2	-	M	Moderate hydrocarbon odour and sheen on perched groundwater
1.0			BH25 1-1.2		44.1	-	M	
1.5							S	
		Natural: Hard white CLAY and soft red SHALE	BH25 1.6-1.8		0.3	-	S	No visual or olfactory evidence of contamination
2.0							DM	
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH30

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 2.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
0.0		Fill: Bitumen			0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
		Fill: Loose black subangular medium gravel sized fragments of roadbase			0	-	DM	
0.5		Fine black sand						
		Reworked natural: Firm red and brown CLAY	BH30 0.8-0.09		0	-	DM	
1.0		Soft brown CLAY						
		Natural: Firm red CLAY and ironstone bands						
1.5								
		Becoming white and red						
2.0			BH30 2.1-2.2		0	-	DM	
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH31

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 2.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
		Fill: Bitumen	BH31 0-0.2		0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
0.5		Fill: Loose black subangular medium gravel sized fragments of roadbase						
		Natural: Firm red and orange CLAY			0	-	DM	
1.0		IRONSTONE						
		Firm grey and red CLAY						
1.5					0	-	DM	
		IRONSTONE						
		Firm grey and red CLAY						
2.0			BH31 2-2.2		0	-	DM	
		End of borehole at target depth in natural soil						
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

GreencapNAA
2/11 Khartoum Road
North Ryde NSW 2113
T: 02 9889 1800
F: 02 9889 1811

Log of Borehole: J130282:BH38

Project No: J130282
Project Name: Waterloo Road
Location: 43-61 Waterloo Road
Client: Government Property NSW
Project Manager: Naomi Price
Type: Borehole

Date: 30/01/2015
Total Depth: 1.2
Groundwater: None encountered
Logged by: Naomi Price
Approved by: Jonathon Hilliard

SUBSURFACE PROFILE			SAMPLE					
Depth (m)	Symbol	Description	Sample name	Duplicate	PID	Field pH	Moisture	Comments
0		Fill: Bitumen			0	-	DM	No visual or olfactory evidence of contamination observed throughout profile
		Fill: Loose black subangular medium gravel sized fragments of roadbase and black sand	BH38 0.3-0.4		0	-	DM	
0.5		Natural: Loose brown CLAY LOAM (topsoil)	BH38 0.4-0.5		0	-		
		Natural: Firm red and brown CLAY with ironstone banding						
1.0							DM	
		End of borehole at target depth in natural soil						
1.5								
2.0								
2.5								
3.0								
3.5								
4.0								
4.5								

Note: This log is for environmental purposes only and is not intended for geotechnical use

Drill Method: Pushtube
Drilled by: Terratest
Sheet: 1 of 1

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Appendix C: Field Sheets

Noel Arnold & Associates
DEVELOPMENT & SAMPLING LOG

A GREENCAP CONSULTING COMPANY

Client:	SPNSW	Logged by:	Naom
Job Name:	Waterloo Rd	Pump Purge Method:	Low Flow Bladder Pump
Job Number:	J130282		
Date:	3/2/15	Well Ref:	GW1

Depth to Water:	5.871	LNAPL Product:	None
Depth of Well:	9.098	DNAPL Product:	None
Thickness of Water:	3.227	Odour:	none

m/s

Time	Amount Purged (L)	Cumulative Purged (L)	Water Level (m)	DO (ppm)	E.Cond (µS/cm) or (dS/cm)	pH (units)	Redox Potential (mV)	Temp (oC)	Comments / Observations: Sheen, Colour, Turbidity, Sediment, Load and Odour
10.41			5.948	3.99	4.98ms	6.03	114	24	slightly turbid, pale
10.46			5.986	3.23	5.00	5.89	124	23.7	grey/brown
10.51			6.05	2.74	4.99	5.71	134	23.4	
10.54			6.105						Check depth - drawing
10.56			6.095	2.27	4.98	5.63	138	23.4	down if continues.
11.01			6.156	2.02	4.96	5.61	142	23.4	bail sample
11.06			6.159	1.97	4.94	5.55	146	23.1	
11.11			6.220	1.90	4.96	5.54	147	23.1	Stabilising drawdown
									<10%. sampled.
11.19			6.38	1.61	4.93	5.57	152	23.3	Post sampling
				+/- 10	+/- 3%	+/- 0.1	+/- 10		

Comments: 1 CPM — Waterlevel @ start of kit 5.78

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Appendix D: Laboratory Transcripts

CERTIFICATE OF ANALYSIS

Work Order	: **ES1502429**	Page	: 1 of 69
Client	: **GREENCAP NAA**	Laboratory	: Environmental Division Sydney
Contact	: MS NAOMI PRICE	Contact	: Client Services
Address	: LEVEL 2, 11 KHARTOUM ROAD NORTH RYDE NSW, AUSTRALIA 2190	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: naomi.price@noel-arnold.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 98891800	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 98891811	Facsimile	: +61-2-8784 8500
Project	: J130282	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: J130282		
C-O-C number	: ----	Date Samples Received	: 03-FEB-2015
Sampler	: NP	Issue Date	: 12-FEB-2015
Site	: ----		
		No. of samples received	: 105
Quote number	: EN/074/14	No. of samples analysed	: 80

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

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.

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.**
- **EP068: Particular samples required dilution due to sample matrix interferences. LOR values have been adjusted accordingly.**
- **EP068: Pozitive results on samples confirmed by re-extraction and re-analysis.**

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*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
		Sydney Organics
Phalak Inthakesone	Laboratory Manager - Organics	Sydney Inorganics
Shobhna Chandra	Metals Coordinator	Sydney Inorganics

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	GW1 2.6-2.7	GW2 0.1-0.2	GW2 1.7-1.75	GW3 0.2-0.3	GW3 0.5-0.6
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-005	ES1502429-006	ES1502429-007	ES1502429-008	ES1502429-009
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		11.8	8.3	18.3	8.9	18.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		12	<5	10	<5	8
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		9	7	25	85	16
Copper	7440-50-8	5	mg/kg		35	<5	10	32	7
Lead	7439-92-1	5	mg/kg		10	10	26	<5	16
Nickel	7440-02-0	2	mg/kg		<2	6	3	111	<2
Zinc	7440-66-6	5	mg/kg		10	21	14	65	7
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Client sample ID	GW1 2.6-2.7	GW2 0.1-0.2	GW2 1.7-1.75	GW3 0.2-0.3	GW3 0.5-0.6
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00
					ES1502429-005	ES1502429-006	ES1502429-007	ES1502429-008	ES1502429-009
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	**0.7**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	**0.8**	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	**0.7**	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	**0.6**	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	**0.8**	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	**0.7**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	**0.6**	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	**4.9**	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	**0.9**	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**1.2**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.5**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	GW1 2.6-2.7	GW2 0.1-0.2	GW2 1.7-1.75	GW3 0.2-0.3	GW3 0.5-0.6
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00
					ES1502429-005	ES1502429-006	ES1502429-007	ES1502429-008	ES1502429-009
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**118**	**107**	**129**	**104**	**119**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**104**	**97.4**	**119**	**103**	**93.0**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**112**	**91.4**	**100**	**113**	**84.2**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**90.0**	**105**	**83.3**	**89.2**	**87.9**
2-Chlorophenol-D4	93951-73-6	0.1	%		**96.6**	**110**	**85.2**	**90.9**	**93.4**
2.4.6-Tribromophenol	118-79-6	0.1	%		**95.4**	**107**	**83.8**	**85.4**	**82.5**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**108**	**116**	**86.2**	**93.7**	**97.3**
Anthracene-d10	1719-06-8	0.1	%		**86.2**	**103**	**82.8**	**82.4**	**81.3**
4-Terphenyl-d14	1718-51-0	0.1	%		**86.2**	**117**	**83.0**	**93.2**	**87.2**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**80.0**	**88.4**	**81.4**	**79.3**	**84.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	GW1 2.6-2.7	GW2 0.1-0.2	GW2 1.7-1.75	GW3 0.2-0.3	GW3 0.5-0.6
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00	29-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-005	ES1502429-006	ES1502429-007	ES1502429-008	ES1502429-009
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**86.2**	**90.9**	**86.0**	**83.4**	**83.4**
4-Bromofluorobenzene	460-00-4	0.1	%		**87.7**	**92.8**	**88.1**	**82.5**	**85.8**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH2 0.1-0.2	BH2 0.7-0.8	BH3 0.3-0.4	BH3 1.0-1.2	BH4 0.8-1
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-010	ES1502429-011	ES1502429-012	ES1502429-013	ES1502429-014
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		9.5	18.3	4.8	47.0	18.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	9	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	2	<1
Chromium	7440-47-3	2	mg/kg		11	10	9	38	27
Copper	7440-50-8	5	mg/kg		12	<5	<5	106	8
Lead	7439-92-1	5	mg/kg		16	21	12	88	10
Nickel	7440-02-0	2	mg/kg		6	<2	5	33	<2
Zinc	7440-66-6	5	mg/kg		56	<5	24	727	7
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	0.4	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH2 0.1-0.2	BH2 0.7-0.8	BH3 0.3-0.4	BH3 1.0-1.2	BH4 0.8-1
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-010	ES1502429-011	ES1502429-012	ES1502429-013	ES1502429-014
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.25	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	**320**	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	**380**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	**700**	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH2 0.1-0.2	BH2 0.7-0.8	BH3 0.3-0.4	BH3 1.0-1.2	BH4 0.8-1
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-010	ES1502429-011	ES1502429-012	ES1502429-013	ES1502429-014
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	**570**	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	**290**	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	**860**	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**106**	**123**	**96.0**	**133**	**131**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**103**	**104**	**98.9**	**124**	**90.5**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**99.3**	**114**	**107**	**117**	**84.9**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**86.8**	**99.6**	**107**	**89.3**	**87.2**
2-Chlorophenol-D4	93951-73-6	0.1	%		**92.2**	**102**	**107**	**85.6**	**93.9**
2.4.6-Tribromophenol	118-79-6	0.1	%		**88.4**	**93.7**	**87.0**	**31.8**	**84.5**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**95.5**	**99.7**	**90.0**	**95.3**	**94.4**
Anthracene-d10	1719-06-8	0.1	%		**85.5**	**85.6**	**89.1**	**84.0**	**84.2**
4-Terphenyl-d14	1718-51-0	0.1	%		**93.5**	**96.8**	**88.4**	**94.7**	**96.4**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**82.4**	**88.5**	**92.3**	**74.9**	**87.4**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH2 0.1-0.2	BH2 0.7-0.8	BH3 0.3-0.4	BH3 1.0-1.2	BH4 0.8-1
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-010	ES1502429-011	ES1502429-012	ES1502429-013	ES1502429-014
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**80.3**	**83.6**	**97.6**	**75.6**	**86.1**
4-Bromofluorobenzene	460-00-4	0.1	%		**86.4**	**87.6**	**98.3**	**74.7**	**89.4**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHD 0.3-0.4	BHD 0.7-0.8	BHE 0-0.15	BHE 0.2-0.3	BHF 0.5-0.6
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-015	ES1502429-016	ES1502429-017	ES1502429-018	ES1502429-019
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		19.5	20.5	11.4	25.5	21.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		12	9	<5	7	8
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		24	24	11	18	21
Copper	7440-50-8	5	mg/kg		<5	7	32	6	<5
Lead	7439-92-1	5	mg/kg		28	47	<5	36	30
Nickel	7440-02-0	2	mg/kg		<2	3	99	<2	2
Zinc	7440-66-6	5	mg/kg		25	330	34	33	15
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHD 0.3-0.4	BHD 0.7-0.8	BHE 0-0.15	BHE 0.2-0.3	BHF 0.5-0.6
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-015	ES1502429-016	ES1502429-017	ES1502429-018	ES1502429-019
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHD 0.3-0.4	BHD 0.7-0.8	BHE 0-0.15	BHE 0.2-0.3	BHF 0.5-0.6
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-015	ES1502429-016	ES1502429-017	ES1502429-018	ES1502429-019
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**127**	**134**	**105**	**91.1**	**115**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**91.6**	**119**	**90.0**	**116**	**102**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**80.4**	**116**	**72.2**	**92.2**	**92.4**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**88.9**	**98.4**	**84.2**	**80.1**	**86.1**
2-Chlorophenol-D4	93951-73-6	0.1	%		**93.9**	**89.7**	**71.1**	**88.2**	**92.9**
2.4.6-Tribromophenol	118-79-6	0.1	%		**82.6**	**95.9**	**15.9**	**67.7**	**64.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**93.2**	**109**	**106**	**90.6**	**98.1**
Anthracene-d10	1719-06-8	0.1	%		**84.7**	**93.9**	**86.2**	**79.4**	**84.2**
4-Terphenyl-d14	1718-51-0	0.1	%		**97.1**	**107**	**95.6**	**92.0**	**95.3**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**83.9**	**85.0**	**85.4**	**93.2**	**84.7**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BHD 0.3-0.4	BHD 0.7-0.8	BHE 0-0.15	BHE 0.2-0.3	BHF 0.5-0.6
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-015	ES1502429-016	ES1502429-017	ES1502429-018	ES1502429-019
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**78.8**	**82.1**	**90.7**	**87.7**	**83.2**
4-Bromofluorobenzene	460-00-4	0.1	%		**85.2**	**86.5**	**90.2**	**90.1**	**88.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BHG 0-0.2	BHG 0.4-0.6	BHG 0.8-0.9	BHG 1.2-1.3	BHG 2.1-2.2
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-020	ES1502429-021	ES1502429-022	ES1502429-023	ES1502429-024
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		5.4	21.4	19.8	15.1	11.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	6	7	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		36	23	11	3	14
Copper	7440-50-8	5	mg/kg		47	<5	<5	6	<5
Lead	7439-92-1	5	mg/kg		18	24	20	17	16
Nickel	7440-02-0	2	mg/kg		20	<2	<2	<2	<2
Zinc	7440-66-6	5	mg/kg		75	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHG 0-0.2	BHG 0.4-0.6	BHG 0.8-0.9	BHG 1.2-1.3	BHG 2.1-2.2
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-020	ES1502429-021	ES1502429-022	ES1502429-023	ES1502429-024
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.25	<0.25	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**0.7**	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		**1.3**	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		**0.8**	**1.9**	**1.4**	**1.3**	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		**15.4**	**2.4**	**1.9**	**1.7**	<0.5
Anthracene	120-12-7	0.5	mg/kg		**3.0**	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		**15.8**	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		**14.7**	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		**4.7**	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		**4.7**	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		**4.0**	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**1.6**	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**4.3**	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**1.2**	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**1.5**	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		**73.7**	**4.3**	**3.3**	**3.0**	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		**5.5**	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**5.8**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**6.0**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	**11**	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	**660**	**520**	**350**	**70**
C15 - C28 Fraction	----	100	mg/kg		**700**	**3460**	**1700**	**1490**	**320**
C29 - C36 Fraction	----	100	mg/kg		**1100**	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**1800**	**4120**	**2220**	**1840**	**390**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHG 0-0.2	BHG 0.4-0.6	BHG 0.8-0.9	BHG 1.2-1.3	BHG 2.1-2.2
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-020	ES1502429-021	ES1502429-022	ES1502429-023	ES1502429-024
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	19	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	19	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		60	1640	1100	820	150
>C16 - C34 Fraction	----	100	mg/kg		1300	2100	890	880	240
>C34 - C40 Fraction	----	100	mg/kg		1520	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		2880	3740	1990	1700	390
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		60	1640	1100	820	150
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		114	100	88.2	93.8	64.7
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		130	128	67.3	96.7	63.9
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		78.8	110	67.2	100	63.1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		90.1	124	110	113	112
2-Chlorophenol-D4	93951-73-6	0.1	%		95.8	109	98.5	96.9	93.8
2.4.6-Tribromophenol	118-79-6	0.1	%		84.5	104	91.7	87.1	86.0
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		95.5	102	97.6	92.5	91.0
Anthracene-d10	1719-06-8	0.1	%		85.7	91.8	84.2	82.2	80.8
4-Terphenyl-d14	1718-51-0	0.1	%		95.3	105	97.3	92.3	90.1
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		87.5	81.6	75.9	73.7	75.8

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BHG 0-0.2	BHG 0.4-0.6	BHG 0.8-0.9	BHG 1.2-1.3	BHG 2.1-2.2
			Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit	ES1502429-020	ES1502429-021	ES1502429-022	ES1502429-023	ES1502429-024
EP080S: TPH(V)/BTEX Surrogates - Continued								
Toluene-D8	2037-26-5	0.1	%	**87.3**	**80.7**	**91.2**	**91.0**	**91.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**87.3**	**85.9**	**89.7**	**89.8**	**91.1**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	GW1 0.2-0.3	GW1 0.4-0.45	FD1	FD2	FD3
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-025	ES1502429-026	ES1502429-027	ES1502429-028	ES1502429-029
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		7.6	13.1	24.5	10.0	14.0
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		5	7	12	6	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	1	<1
Chromium	7440-47-3	2	mg/kg		81	19	26	67	2
Copper	7440-50-8	5	mg/kg		29	<5	<5	28	<5
Lead	7439-92-1	5	mg/kg		<5	34	23	9	16
Nickel	7440-02-0	2	mg/kg		96	<2	2	79	<2
Zinc	7440-66-6	5	mg/kg		43	19	<5	112	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Client sample ID: GW1 0.2-0.3	GW1 0.4-0.45	FD1	FD2	FD3
				Client sampling date / time: 29-JAN-2015 15:00	29-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	02-FEB-2015 15:00
				ES1502429-025	ES1502429-026	ES1502429-027	ES1502429-028	ES1502429-029
EP068A: Organochlorine Pesticides (OC) - Continued								
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.4**
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.4**
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	**21**
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	**320**
C15 - C28 Fraction	----	100	mg/kg	**130**	<100	<100	<100	**1090**
C29 - C36 Fraction	----	100	mg/kg	**230**	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**360**	<50	<50	<50	**1410**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	GW1 0.2-0.3	GW1 0.4-0.45	FD1	FD2	FD3
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	02-FEB-2015 15:00
					ES1502429-025	ES1502429-026	ES1502429-027	ES1502429-028	ES1502429-029
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	29
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	29
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	660
>C16 - C34 Fraction	----	100	mg/kg		300	<100	<100	<100	760
>C34 - C40 Fraction	----	100	mg/kg		310	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		610	<50	<50	<50	1420
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	660
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		85.0	93.4	96.3	64.0	86.6
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		86.9	119	117	105	124
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		82.7	119	117	105	99.5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		110	114	107	103	99.1
2-Chlorophenol-D4	93951-73-6	0.1	%		110	115	109	105	105
2.4.6-Tribromophenol	118-79-6	0.1	%		89.7	88.1	77.8	78.9	87.0
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		107	106	107	104	98.4
Anthracene-d10	1719-06-8	0.1	%		102	102	101	98.4	93.3
4-Terphenyl-d14	1718-51-0	0.1	%		109	111	116	110	104
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		108	80.5	99.0	109	107

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	GW1 0.2-0.3	GW1 0.4-0.45	FD1	FD2	FD3
				Client sampling date / time	29-JAN-2015 15:00	29-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-025	ES1502429-026	ES1502429-027	ES1502429-028	ES1502429-029
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**118**	**108**	**103**	**112**	**110**
4-Bromofluorobenzene	460-00-4	0.1	%		**108**	**98.9**	**92.7**	**102**	**103**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	FD4	BHA 0.5-0.6	BHA 1-1.2	BHA 1.8-2	BHB 0.2-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-030	ES1502429-031	ES1502429-032	ES1502429-033	ES1502429-034
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		19.5	19.4	13.1	13.3	3.5
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		5	6	<5	21	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		15	22	8	3	41
Copper	7440-50-8	5	mg/kg		<5	<5	<5	11	48
Lead	7439-92-1	5	mg/kg		24	24	23	12	21
Nickel	7440-02-0	2	mg/kg		<2	6	<2	<2	31
Zinc	7440-66-6	5	mg/kg		6	8	<5	<5	69
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	FD4	BHA 0.5-0.6	BHA 1-1.2	BHA 1.8-2	BHB 0.2-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-030	ES1502429-031	ES1502429-032	ES1502429-033	ES1502429-034
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**0.8**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**1.2**
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**0.8**
Phenanthrene	85-01-8	0.5	mg/kg		**6.7**	<0.5	**1.0**	<0.5	**12.2**
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**2.4**
Fluoranthene	206-44-0	0.5	mg/kg		**0.7**	<0.5	<0.5	<0.5	**11.4**
Pyrene	129-00-0	0.5	mg/kg		**0.7**	<0.5	<0.5	<0.5	**11.1**
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**3.4**
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**3.3**
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**3.4**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**1.4**
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**3.1**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**1.4**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**2.0**
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		**8.1**	<0.5	**1.0**	<0.5	**57.9**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**4.1**
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**4.4**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**4.6**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		**1730**	**190**	**250**	<50	<50
C15 - C28 Fraction	----	100	mg/kg		**6480**	**880**	**990**	<100	**740**
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	**920**
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**8210**	**1070**	**1240**	<50	**1660**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	FD4	BHA 0.5-0.6	BHA 1-1.2	BHA 1.8-2	BHB 0.2-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
					ES1502429-030	ES1502429-031	ES1502429-032	ES1502429-033	ES1502429-034
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		**14**	<10	**14**	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		**14**	<10	**14**	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		**3750**	**380**	**570**	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		**3800**	**790**	**550**	<100	**1350**
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	**1270**
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**7550**	**1170**	**1120**	<50	**2620**
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		**3750**	**380**	**570**	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**85.2**	**87.4**	**99.9**	**98.6**	**83.0**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**80.8**	**127**	**127**	**130**	**102**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**70.8**	**104**	**107**	**129**	**73.4**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**98.8**	**107**	**110**	**110**	**103**
2-Chlorophenol-D4	93951-73-6	0.1	%		**102**	**110**	**114**	**109**	**105**
2.4.6-Tribromophenol	118-79-6	0.1	%		**83.5**	**88.2**	**91.5**	**84.3**	**54.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**89.0**	**101**	**106**	**108**	**97.9**
Anthracene-d10	1719-06-8	0.1	%		**88.2**	**96.6**	**102**	**105**	**93.2**
4-Terphenyl-d14	1718-51-0	0.1	%		**101**	**110**	**113**	**114**	**101**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**79.5**	**76.1**	**79.4**	**93.7**	**97.8**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	FD4	BHA 0.5-0.6	BHA 1-1.2	BHA 1.8-2	BHB 0.2-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-030	ES1502429-031	ES1502429-032	ES1502429-033	ES1502429-034
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**79.7**	**76.7**	**76.6**	**106**	**112**
4-Bromofluorobenzene	460-00-4	0.1	%		**81.1**	**76.3**	**78.7**	**105**	**106**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BHB 1.2-1.4	BHB 2-2.2	BHC 0-0.2	BHC 0.4-0.6	BH38 0.3-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-035	ES1502429-036	ES1502429-037	ES1502429-038	ES1502429-039
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		9.8	14.3	4.2	20.9	6.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	6	<5	5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		28	<2	55	22	98
Copper	7440-50-8	5	mg/kg		21	8	44	<5	29
Lead	7439-92-1	5	mg/kg		<5	9	16	18	<5
Nickel	7440-02-0	2	mg/kg		36	<2	19	<2	106
Zinc	7440-66-6	5	mg/kg		28	<5	55	6	51
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHB 1.2-1.4	BHB 2-2.2	BHC 0-0.2	BHC 0.4-0.6	BH38 0.3-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
					ES1502429-035	ES1502429-036	ES1502429-037	ES1502429-038	ES1502429-039
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	**0.8**	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	**1.0**	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	**6.1**	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	**1.3**	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	**5.8**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	**5.6**	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	**1.7**	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	**1.7**	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	**1.9**	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	**0.5**	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	**1.5**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	**0.7**	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	**0.9**	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	**29.5**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	**2.0**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**2.2**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**2.5**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	**520**	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**660**	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	**1180**	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BHB 1.2-1.4	BHB 2-2.2	BHC 0-0.2	BHC 0.4-0.6	BH38 0.3-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
					ES1502429-035	ES1502429-036	ES1502429-037	ES1502429-038	ES1502429-039
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	**920**	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	**1010**	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	**1930**	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**81.4**	**103**	**105**	**91.2**	**72.5**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**116**	**129**	**86.0**	**119**	**127**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**65.8**	**116**	**71.4**	**114**	**112**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**107**	**105**	**98.2**	**104**	**106**
2-Chlorophenol-D4	93951-73-6	0.1	%		**87.6**	**108**	**102**	**108**	**109**
2.4.6-Tribromophenol	118-79-6	0.1	%		**59.0**	**79.4**	**84.1**	**89.5**	**88.3**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**103**	**101**	**93.6**	**102**	**103**
Anthracene-d10	1719-06-8	0.1	%		**99.7**	**98.7**	**89.9**	**98.7**	**101**
4-Terphenyl-d14	1718-51-0	0.1	%		**105**	**107**	**97.5**	**106**	**111**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**100**	**73.3**	**98.9**	**88.8**	**104**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BHB 1.2-1.4	BHB 2-2.2	BHC 0-0.2	BHC 0.4-0.6	BH38 0.3-0.4
				Client sampling date / time	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-035	ES1502429-036	ES1502429-037	ES1502429-038	ES1502429-039
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**113**	**94.7**	**112**	**104**	**116**
4-Bromofluorobenzene	460-00-4	0.1	%		**103**	**76.0**	**102**	**96.0**	**104**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH38 0.4-0.5	BH39 0-0.2	BH41 0.25-0.35	BH27 0.4-0.6	BH22 1-1.25
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-040	ES1502429-041	ES1502429-042	ES1502429-043	ES1502429-044
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		19.0	4.6	14.2	11.8	24.0
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	<5	6	<5	9
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		18	100	4	4	26
Copper	7440-50-8	5	mg/kg		6	33	6	5	10
Lead	7439-92-1	5	mg/kg		38	5	12	16	29
Nickel	7440-02-0	2	mg/kg		2	117	<2	<2	8
Zinc	7440-66-6	5	mg/kg		14	56	<5	<5	27
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH38 0.4-0.5	BH39 0-0.2	BH41 0.25-0.35	BH27 0.4-0.6	BH22 1-1.25
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-040	ES1502429-041	ES1502429-042	ES1502429-043	ES1502429-044
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH38 0.4-0.5	BH39 0-0.2	BH41 0.25-0.35	BH27 0.4-0.6	BH22 1-1.25
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-040	ES1502429-041	ES1502429-042	ES1502429-043	ES1502429-044
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**90.8**	**84.7**	**73.2**	**81.7**	**104**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**125**	**127**	**117**	**126**	**124**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**111**	**111**	**104**	**116**	**108**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**107**	**105**	**103**	**106**	**107**
2-Chlorophenol-D4	93951-73-6	0.1	%		**110**	**107**	**106**	**110**	**111**
2.4.6-Tribromophenol	118-79-6	0.1	%		**91.1**	**84.3**	**87.4**	**83.6**	**91.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**104**	**101**	**101**	**104**	**105**
Anthracene-d10	1719-06-8	0.1	%		**101**	**98.6**	**96.7**	**101**	**100**
4-Terphenyl-d14	1718-51-0	0.1	%		**111**	**106**	**105**	**110**	**111**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**82.6**	**88.5**	**80.0**	**74.5**	**80.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH38 0.4-0.5	BH39 0-0.2	BH41 0.25-0.35	BH27 0.4-0.6	BH22 1-1.25
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-040	ES1502429-041	ES1502429-042	ES1502429-043	ES1502429-044
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**95.8**	**104**	**98.9**	**98.4**	**96.4**
4-Bromofluorobenzene	460-00-4	0.1	%		**87.3**	**92.8**	**89.6**	**92.0**	**86.0**

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Client sample ID	BH24 0-0.1	BH25 0.6-0.8	BH25 1-1.2	BH25 1.6-1.8	BH26 0.2-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-045	ES1502429-046	ES1502429-047	ES1502429-048	ES1502429-049
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**3.8**	**6.0**	**19.6**	**12.0**	**8.8**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	**13**	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**108**	<2	**3**	**4**	**3**
Copper	7440-50-8	5	mg/kg		**34**	<5	<5	**8**	<5
Lead	7439-92-1	5	mg/kg		**14**	<5	<5	**13**	**11**
Nickel	7440-02-0	2	mg/kg		**98**	<2	<2	<2	<2
Zinc	7440-66-6	5	mg/kg		**50**	<5	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH24 0-0.1	BH25 0.6-0.8	BH25 1-1.2	BH25 1.6-1.8	BH26 0.2-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-045	ES1502429-046	ES1502429-047	ES1502429-048	ES1502429-049
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.25	<0.25	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	**2.3**	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	**2.8**	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	**3.7**	**6.3**	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	**1.1**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	**0.7**	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	**6.5**	**10.4**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	**920**	**8900**	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	**3480**	**28000**	<100	**190**
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**210**	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**4400**	**37100**	<50	**190**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH24 0-0.1	BH25 0.6-0.8	BH25 1-1.2	BH25 1.6-1.8	BH26 0.2-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-045	ES1502429-046	ES1502429-047	ES1502429-048	ES1502429-049
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	18	17	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	18	17	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	2080	18600	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	2430	18200	<100	230
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	4510	36900	<50	230
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	2080	18600	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		123	80.4	115	116	120
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		82.7	64.3	74.5	107	110
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		89.2	63.2	108	79.2	73.0
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		123	97.4	93.4	93.9	89.8
2-Chlorophenol-D4	93951-73-6	0.1	%		98.8	102	96.3	96.0	94.8
2.4.6-Tribromophenol	118-79-6	0.1	%		99.5	100	100	94.0	92.1
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		101	102	87.9	100	99.3
Anthracene-d10	1719-06-8	0.1	%		90.1	92.7	88.7	90.9	88.8
4-Terphenyl-d14	1718-51-0	0.1	%		99.3	103	100	100	97.7
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		95.5	104	75.0	96.9	99.7

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH24 0-0.1	BH25 0.6-0.8	BH25 1-1.2	BH25 1.6-1.8	BH26 0.2-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-045	ES1502429-046	ES1502429-047	ES1502429-048	ES1502429-049
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**102**	**106**	**103**	**102**	**104**
4-Bromofluorobenzene	460-00-4	0.1	%		**93.2**	**97.4**	**92.9**	**106**	**108**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH30 0.8-0.9	BH31 0-0.2	BH32 0-0.2	BH34 0.4-0.5	BH36 0.1-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-050	ES1502429-051	ES1502429-052	ES1502429-053	ES1502429-054
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		21.8	3.7	6.3	12.6	15.4
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		10	<5	<5	<5	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		17	117	112	4	15
Copper	7440-50-8	5	mg/kg		<5	31	33	<5	28
Lead	7439-92-1	5	mg/kg		23	<5	<5	36	41
Nickel	7440-02-0	2	mg/kg		<2	114	132	<2	12
Zinc	7440-66-6	5	mg/kg		6	50	56	<5	101
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH30 0.8-0.9	BH31 0-0.2	BH32 0-0.2	BH34 0.4-0.5	BH36 0.1-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-050	ES1502429-051	ES1502429-052	ES1502429-053	ES1502429-054
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**0.6**
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**0.6**
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**1.2**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	**150**	<100	**110**	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	**100**
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**150**	<50	**110**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH30 0.8-0.9	BH31 0-0.2	BH32 0-0.2	BH34 0.4-0.5	BH36 0.1-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-050	ES1502429-051	ES1502429-052	ES1502429-053	ES1502429-054
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	**200**	<100	**140**	**120**
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	**100**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	**200**	<50	**140**	**220**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**126**	**119**	**116**	**114**	**123**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**115**	**82.7**	**77.1**	**88.2**	**95.1**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**89.6**	**91.9**	**85.6**	**94.1**	**97.8**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**86.3**	**86.3**	**89.7**	**83.8**	**83.7**
2-Chlorophenol-D4	93951-73-6	0.1	%		**95.6**	**93.0**	**95.6**	**95.4**	**94.6**
2.4.6-Tribromophenol	118-79-6	0.1	%		**94.2**	**88.0**	**90.0**	**89.1**	**93.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**99.3**	**98.6**	**100**	**97.9**	**99.9**
Anthracene-d10	1719-06-8	0.1	%		**88.4**	**87.6**	**89.4**	**87.7**	**87.3**
4-Terphenyl-d14	1718-51-0	0.1	%		**101**	**97.3**	**99.0**	**96.9**	**99.0**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**105**	**98.8**	**91.0**	**100**	**92.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH30 0.8-0.9	BH31 0-0.2	BH32 0-0.2	BH34 0.4-0.5	BH36 0.1-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-050	ES1502429-051	ES1502429-052	ES1502429-053	ES1502429-054
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**115**	**118**	**110**	**106**	**104**
4-Bromofluorobenzene	460-00-4	0.1	%		**118**	**119**	**110**	**108**	**106**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH37 0.3-0.4	BH17 1.5-1.6	BH18 0-0.2	BH18 0.6-0.8	BH19 0.05-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-055	ES1502429-056	ES1502429-057	ES1502429-058	ES1502429-059
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		19.1	20.5	6.6	12.4	11.0
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		8	6	<5	7	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		23	14	136	7	11
Copper	7440-50-8	5	mg/kg		<5	<5	34	<5	61
Lead	7439-92-1	5	mg/kg		21	21	<5	14	9
Nickel	7440-02-0	2	mg/kg		<2	<2	128	<2	38
Zinc	7440-66-6	5	mg/kg		<5	9	56	<5	36
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Client sample ID	BH37 0.3-0.4	BH17 1.5-1.6	BH18 0-0.2	BH18 0.6-0.8	BH19 0.05-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-055	ES1502429-056	ES1502429-057	ES1502429-058	ES1502429-059
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		**100**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**100**	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH37 0.3-0.4	BH17 1.5-1.6	BH18 0-0.2	BH18 0.6-0.8	BH19 0.05-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-055	ES1502429-056	ES1502429-057	ES1502429-058	ES1502429-059
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		**130**	**110**	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**130**	**110**	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**112**	**105**	**101**	**86.6**	**90.1**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**96.3**	**85.7**	**84.4**	**78.5**	**76.2**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**96.2**	**89.4**	**80.8**	**67.9**	**81.2**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**121**	**102**	**89.5**	**91.2**	**90.2**
2-Chlorophenol-D4	93951-73-6	0.1	%		**93.2**	**95.3**	**96.1**	**98.3**	**93.1**
2.4.6-Tribromophenol	118-79-6	0.1	%		**89.5**	**92.5**	**91.4**	**92.1**	**93.3**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**98.1**	**102**	**100**	**103**	**98.5**
Anthracene-d10	1719-06-8	0.1	%		**87.6**	**89.4**	**89.3**	**91.5**	**88.0**
4-Terphenyl-d14	1718-51-0	0.1	%		**97.5**	**99.9**	**99.2**	**104**	**100**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**98.1**	**96.0**	**101**	**98.2**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH37 0.3-0.4	BH17 1.5-1.6	BH18 0-0.2	BH18 0.6-0.8	BH19 0.05-0.2
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-055	ES1502429-056	ES1502429-057	ES1502429-058	ES1502429-059
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**104**	**103**	**113**	**108**	**107**
4-Bromofluorobenzene	460-00-4	0.1	%		**107**	**101**	**110**	**108**	**105**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH19 0.2-0.3	BH20 0.25-0.4	BH20 0.45-0.55	BH21 0-0.2	BH22 0.23-0.35
				Client sampling date / time	30-JAN-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
					ES1502429-060	ES1502429-061	ES1502429-062	ES1502429-063	ES1502429-064
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		12.8	15.6	10.4	13.8	6.1
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		13	13	5	42	85
Copper	7440-50-8	5	mg/kg		<5	44	6	116	26
Lead	7439-92-1	5	mg/kg		21	14	24	76	<5
Nickel	7440-02-0	2	mg/kg		<2	39	<2	7	95
Zinc	7440-66-6	5	mg/kg		25	36	<5	406	44
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	0.34	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	0.18	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	0.16	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH19 0.2-0.3	BH20 0.25-0.4	BH20 0.45-0.55	BH21 0-0.2	BH22 0.23-0.35
				Client sampling date / time	30-JAN-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
					ES1502429-060	ES1502429-061	ES1502429-062	ES1502429-063	ES1502429-064
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH19 0.2-0.3	BH20 0.25-0.4	BH20 0.45-0.55	BH21 0-0.2	BH22 0.23-0.35
				Client sampling date / time	30-JAN-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
					ES1502429-060	ES1502429-061	ES1502429-062	ES1502429-063	ES1502429-064
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**90.5**	**87.5**	**89.9**	**88.1**	**81.6**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**94.4**	**87.2**	**83.2**	**87.7**	**68.4**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**83.7**	**84.5**	**78.1**	**64.8**	**68.4**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**87.3**	**91.1**	**90.6**	**83.6**	**88.3**
2-Chlorophenol-D4	93951-73-6	0.1	%		**94.6**	**93.3**	**94.0**	**89.9**	**95.2**
2.4.6-Tribromophenol	118-79-6	0.1	%		**90.8**	**89.4**	**86.9**	**94.9**	**90.4**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**99.8**	**99.3**	**99.2**	**97.9**	**100**
Anthracene-d10	1719-06-8	0.1	%		**89.6**	**89.5**	**89.2**	**86.6**	**89.6**
4-Terphenyl-d14	1718-51-0	0.1	%		**99.4**	**99.6**	**99.9**	**99.4**	**100**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**90.4**	**83.9**	**86.2**	**91.4**	**91.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH19 0.2-0.3	BH20 0.25-0.4	BH20 0.45-0.55	BH21 0-0.2	BH22 0.23-0.35
				Client sampling date / time	30-JAN-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	02-FEB-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-060	ES1502429-061	ES1502429-062	ES1502429-063	ES1502429-064
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**96.5**	**89.8**	**92.6**	**92.4**	**106**
4-Bromofluorobenzene	460-00-4	0.1	%		**94.5**	**89.5**	**88.8**	**89.4**	**101**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0-0.2	BH10 0.8-1	BH11 0.2-0.4	BH11 1.6-1.8	BH11 2.4-2.6
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-065	ES1502429-066	ES1502429-067	ES1502429-068	ES1502429-069
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		6.4	17.9	7.0	24.2	19.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	12	<5	18	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		7	34	54	29	8
Copper	7440-50-8	5	mg/kg		<5	10	35	<5	<5
Lead	7439-92-1	5	mg/kg		11	38	12	24	12
Nickel	7440-02-0	2	mg/kg		6	3	65	<2	<2
Zinc	7440-66-6	5	mg/kg		28	55	68	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH10 0-0.2	BH10 0.8-1	BH11 0.2-0.4	BH11 1.6-1.8	BH11 2.4-2.6
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-065	ES1502429-066	ES1502429-067	ES1502429-068	ES1502429-069
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	**0.6**	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	**0.6**	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	**0.7**	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	**0.6**	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	**1.9**	**0.6**	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH10 0-0.2	BH10 0.8-1	BH11 0.2-0.4	BH11 1.6-1.8	BH11 2.4-2.6
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-065	ES1502429-066	ES1502429-067	ES1502429-068	ES1502429-069
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	**100**	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	**100**	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**95.0**	**84.7**	**91.0**	**98.4**	**79.4**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**78.9**	**105**	**129**	**127**	**125**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**78.2**	**93.5**	**110**	**105**	**95.6**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**108**	**90.6**	**99.7**	**117**	**104**
2-Chlorophenol-D4	93951-73-6	0.1	%		**109**	**96.4**	**91.4**	**118**	**103**
2.4.6-Tribromophenol	118-79-6	0.1	%		**78.6**	**75.2**	**85.8**	**104**	**81.7**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**105**	**85.7**	**114**	**108**	**110**
Anthracene-d10	1719-06-8	0.1	%		**101**	**73.5**	**105**	**85.7**	**91.3**
4-Terphenyl-d14	1718-51-0	0.1	%		**110**	**87.3**	**116**	**110**	**99.1**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**88.2**	**82.8**	**83.7**	**80.5**	**81.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0-0.2	BH10 0.8-1	BH11 0.2-0.4	BH11 1.6-1.8	BH11 2.4-2.6
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-065	ES1502429-066	ES1502429-067	ES1502429-068	ES1502429-069
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**91.2**	**82.4**	**85.9**	**83.2**	**83.0**
4-Bromofluorobenzene	460-00-4	0.1	%		**93.5**	**86.1**	**89.1**	**87.0**	**87.8**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH13 0-0.15	BH15 0.6-0.7	BH16 0.6-0.8	BH16 1.4-1.6	BH5 0.3-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-070	ES1502429-071	ES1502429-072	ES1502429-073	ES1502429-074
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		7.6	19.7	23.8	17.0	8.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	7	7	5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		10	16	24	4	6
Copper	7440-50-8	5	mg/kg		5	<5	6	<5	<5
Lead	7439-92-1	5	mg/kg		19	63	24	16	<5
Nickel	7440-02-0	2	mg/kg		9	<2	<2	<2	<2
Zinc	7440-66-6	5	mg/kg		19	18	6	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH13 0-0.15	BH15 0.6-0.7	BH16 0.6-0.8	BH16 1.4-1.6	BH5 0.3-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-070	ES1502429-071	ES1502429-072	ES1502429-073	ES1502429-074
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH13 0-0.15	BH15 0.6-0.7	BH16 0.6-0.8	BH16 1.4-1.6	BH5 0.3-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-070	ES1502429-071	ES1502429-072	ES1502429-073	ES1502429-074
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**88.0**	**71.6**	**85.1**	**78.0**	**92.6**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**100**	**107**	**117**	**123**	**75.1**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**82.2**	**77.4**	**83.0**	**84.4**	**81.7**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**99.8**	**94.0**	**81.7**	**112**	**98.4**
2-Chlorophenol-D4	93951-73-6	0.1	%		**103**	**100**	**86.5**	**99.2**	**98.5**
2.4.6-Tribromophenol	118-79-6	0.1	%		**61.2**	**76.8**	**73.5**	**72.0**	**79.4**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**102**	**95.6**	**97.8**	**99.8**	**95.7**
Anthracene-d10	1719-06-8	0.1	%		**89.6**	**82.5**	**88.4**	**88.2**	**91.9**
4-Terphenyl-d14	1718-51-0	0.1	%		**97.6**	**89.6**	**91.8**	**86.9**	**99.8**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**86.6**	**88.0**	**77.7**	**84.7**	**92.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH13 0-0.15	BH15 0.6-0.7	BH16 0.6-0.8	BH16 1.4-1.6	BH5 0.3-0.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-070	ES1502429-071	ES1502429-072	ES1502429-073	ES1502429-074
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**89.4**	**87.9**	**76.5**	**83.4**	**91.6**
4-Bromofluorobenzene	460-00-4	0.1	%		**90.2**	**87.2**	**79.5**	**84.4**	**96.2**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH5 0.4-0.5	BH6 0-0.1	BH6 0.4-0.5	BH8 0.5-0.6	BH8 2.2-2.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-075	ES1502429-076	ES1502429-077	ES1502429-078	ES1502429-079
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		7.2	8.0	11.5	7.0	17.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	6	11	10
Cadmium	7440-43-9	1	mg/kg		<1	1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		7	72	9	14	22
Copper	7440-50-8	5	mg/kg		<5	31	9	20	40
Lead	7439-92-1	5	mg/kg		11	10	19	18	17
Nickel	7440-02-0	2	mg/kg		5	82	<2	22	6
Zinc	7440-66-6	5	mg/kg		24	102	<5	69	25
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH5 0.4-0.5	BH6 0-0.1	BH6 0.4-0.5	BH8 0.5-0.6	BH8 2.2-2.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-075	ES1502429-076	ES1502429-077	ES1502429-078	ES1502429-079
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	BH5 0.4-0.5	BH6 0-0.1	BH6 0.4-0.5	BH8 0.5-0.6	BH8 2.2-2.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
					ES1502429-075	ES1502429-076	ES1502429-077	ES1502429-078	ES1502429-079
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**85.8**	**103**	**103**	**80.0**	**75.8**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		**117**	**124**	**130**	**99.9**	**113**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		**94.7**	**90.0**	**112**	**72.8**	**84.4**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**106**	**87.5**	**87.5**	**86.2**	**74.3**
2-Chlorophenol-D4	93951-73-6	0.1	%		**103**	**94.8**	**93.4**	**90.9**	**70.3**
2.4.6-Tribromophenol	118-79-6	0.1	%		**75.0**	**69.7**	**63.8**	**57.6**	**49.4**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**102**	**94.4**	**88.1**	**85.2**	**73.3**
Anthracene-d10	1719-06-8	0.1	%		**92.5**	**87.7**	**79.3**	**77.3**	**77.3**
4-Terphenyl-d14	1718-51-0	0.1	%		**94.7**	**88.1**	**75.2**	**73.4**	**68.8**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**88.6**	**82.7**	**83.3**	**88.3**	**87.2**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH5 0.4-0.5	BH6 0-0.1	BH6 0.4-0.5	BH8 0.5-0.6	BH8 2.2-2.4
				Client sampling date / time	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00	30-JAN-2015 15:00
Compound	CAS Number	LOR	Unit		ES1502429-075	ES1502429-076	ES1502429-077	ES1502429-078	ES1502429-079
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**87.0**	**84.8**	**81.9**	**85.6**	**88.7**
4-Bromofluorobenzene	460-00-4	0.1	%		**84.9**	**83.9**	**84.6**	**87.6**	**89.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH9 1.9-2.1	----	----	----	----
				Client sampling date / time	30-JAN-2015 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1502429-080	----	----	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**17.6**	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**17**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		**22**	----	----	----	----
Copper	7440-50-8	5	mg/kg		**27**	----	----	----	----
Lead	7439-92-1	5	mg/kg		**13**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg		<5	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH9 1.9-2.1	----	----	----	----
				Client sampling date / time	30-JAN-2015 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1502429-080	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg		<0.05	----	----	----	----
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+j)fluoranthene	205-99-2 205-82-3	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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH9 1.9-2.1	----	----	----	----
			Client sampling date / time	30-JAN-2015 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES1502429-080	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>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	%	**81.9**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	**116**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**91.7**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**78.8**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**78.8**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**64.3**	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**77.3**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**83.3**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**67.8**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**80.4**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH9 1.9-2.1	----	----	----	----
				Client sampling date / time	30-JAN-2015 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1502429-080	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.1	%		**80.5**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**83.7**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	GW1	GW2	GW3	DUP1	----
				Client sampling date / time	[03-FEB-2015]	[03-FEB-2015]	[03-FEB-2015]	[03-FEB-2015]	----
Compound	CAS Number	LOR	Unit		ES1502429-001	ES1502429-002	ES1502429-003	ES1502429-004	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		6.02	6.37	6.50	6.41	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		5010	3480	949	3470	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.04	0.08	0.06	0.06	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.002	0.001	0.002	----
Cadmium	7440-43-9	0.0001	mg/L		0.0001	0.0012	<0.0001	0.0011	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L		0.029	0.003	0.004	0.003	----
Nickel	7440-02-0	0.001	mg/L		0.242	0.066	0.165	0.067	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L		0.289	0.212	0.119	0.214	----
Iron	7439-89-6	0.05	mg/L		2.66	18.1	1.87	18.0	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L		<100	<100	<100	<100	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	<20	----
>C10 - C16 Fraction	>C10_C16	100	µg/L		<100	<100	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	<100	<100	<100	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	<100	<100	<100	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	<1	<1	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	GW1	GW2	GW3	DUP1	----
			Client sampling date / time	[03-FEB-2015]	[03-FEB-2015]	[03-FEB-2015]	[03-FEB-2015]	----
Compound	CAS Number	LOR	Unit	ES1502429-001	ES1502429-002	ES1502429-003	ES1502429-004	----
EP080: BTEXN - Continued								
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	----
^ **Total Xylenes**	1330-20-7	2	µg/L	<2	<2	<2	<2	----
^ **Sum of BTEX**	----	1	µg/L	<1	<1	<1	<1	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**97.8**	**100**	**95.3**	**96.0**	----
Toluene-D8	2037-26-5	0.1	%	**111**	**85.3**	**110**	**108**	----
4-Bromofluorobenzene	460-00-4	0.1	%	**98.5**	**100**	**102**	**104**	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1502429**	Page	: 1 of 25
Client	: GREENCAP NAA	Laboratory	: Environmental Division Sydney
Contact	: MS NAOMI PRICE	Contact	: Client Services
Address	: LEVEL 2, 11 KHARTOUM ROAD NORTH RYDE NSW, AUSTRALIA 2190	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
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Project	: J130282	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 03-FEB-2015
Sampler	: NP	Issue Date	: 12-FEB-2015
Order number	: J130282		
		No. of samples received	: 105
Quote number	: EN/074/14	No. of samples analysed	: 80

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 / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
BHD 0.3-0.4,	BHD 0.7-0.8,	**02-FEB-2015**	**----**	----	----	**04-FEB-2015**	16-FEB-2015	✓
BHE 0-0.15,	BHE 0.2-0.3,							
BHF 0.5-0.6,	BHG 0-0.2,							
BHG 0.4-0.6,	BHG 0.8-0.9,							
BHG 1.2-1.3,	BHG 2.1-2.2							
Soil Glass Jar - Unpreserved (EA055-103)								
FD3,	FD4,	**02-FEB-2015**	**----**	----	----	**05-FEB-2015**	16-FEB-2015	✓
BHA 0.5-0.6,	BHA 1-1.2,							
BHA 1.8-2,	BHB 0.2-0.4,							
BHB 1.2-1.4,	BHB 2-2.2,							
BHC 0-0.2,	BHC 0.4-0.6,							
BH20 0.25-0.4,	BH20 0.45-0.55,							
BH21 0-0.2								
Soil Glass Jar - Unpreserved (EA055-103)								
GW1 2.6-2.7,	GW2 0.1-0.2,	**29-JAN-2015**	**----**	----	----	**04-FEB-2015**	12-FEB-2015	✓
GW2 1.7-1.75,	GW3 0.2-0.3,							
GW3 0.5-0.6								
Soil Glass Jar - Unpreserved (EA055-103)								
GW1 0.2-0.3,	GW1 0.4-0.45	**29-JAN-2015**	**----**	----	----	**05-FEB-2015**	12-FEB-2015	✓
Soil Glass Jar - Unpreserved (EA055-103)								
BH2 0.1-0.2,	BH2 0.7-0.8,	**30-JAN-2015**	**----**	----	----	**04-FEB-2015**	13-FEB-2015	✓
BH3 0.3-0.4,	BH3 1.0-1.2,							
BH4 0.8-1								
Soil Glass Jar - Unpreserved (EA055-103)								

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content - Continued								
FD1,	FD2,	**30-JAN-2015**	**----**	----	----	**05-FEB-2015**	13-FEB-2015	✓
BH38 0.3-0.4,	BH38 0.4-0.5,							
BH39 0-0.2,	BH41 0.25-0.35,							
BH27 0.4-0.6,	BH22 1-1.25,							
BH24 0-0.1,	BH25 0.6-0.8,							
BH25 1-1.2,	BH25 1.6-1.8,							
BH26 0.2-0.4,	BH30 0.8-0.9,							
BH31 0-0.2,	BH32 0-0.2,							
BH34 0.4-0.5,	BH36 0.1-0.2,							
BH37 0.3-0.4,	BH17 1.5-1.6,							
BH18 0-0.2,	BH18 0.6-0.8,							
BH19 0.05-0.2,	BH19 0.2-0.3,							
BH22 0.23-0.35,	BH10 0-0.2,							
BH10 0.8-1,	BH11 0.2-0.4,							
BH11 1.6-1.8,	BH11 2.4-2.6,							
BH13 0-0.15,	BH15 0.6-0.7,							
BH16 0.6-0.8,	BH16 1.4-1.6,							
BH5 0.3-0.4,	BH5 0.4-0.5,							
BH6 0-0.1,	BH6 0.4-0.5,							
BH8 0.5-0.6,	BH8 2.2-2.4,							
BH9 1.9-2.1								

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6	**02-FEB-2015**	**09-FEB-2015**	01-AUG-2015	✓	**10-FEB-2015**	01-AUG-2015	✓
Soil Glass Jar - Unpreserved (EG005T)							
BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**10-FEB-2015**	01-AUG-2015	✓	**10-FEB-2015**	01-AUG-2015	✓
Soil Glass Jar - Unpreserved (EG005T)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**09-FEB-2015**	28-JUL-2015	✓	**10-FEB-2015**	28-JUL-2015	✓
Soil Glass Jar - Unpreserved (EG005T)							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25	**30-JAN-2015**	**09-FEB-2015**	29-JUL-2015	✓	**10-FEB-2015**	29-JUL-2015	✓
Soil Glass Jar - Unpreserved (EG005T)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES - Continued							
BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35, BH10 0-0.2, BH10 0.8-1, BH11 0.2-0.4, BH11 1.6-1.8, BH11 2.4-2.6, BH13 0-0.15, BH15 0.6-0.7, BH16 0.6-0.8, BH16 1.4-1.6, BH5 0.3-0.4, BH5 0.4-0.5, BH6 0-0.1, BH6 0.4-0.5, BH8 0.5-0.6, BH8 2.2-2.4, BH9 1.9-2.1	**30-JAN-2015**	**10-FEB-2015**	29-JUL-2015	✓	**10-FEB-2015**	29-JUL-2015	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6	**02-FEB-2015**	**09-FEB-2015**	02-MAR-2015	✓	**10-FEB-2015**	02-MAR-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							
BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**10-FEB-2015**	02-MAR-2015	✓	**11-FEB-2015**	02-MAR-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**09-FEB-2015**	26-FEB-2015	✓	**10-FEB-2015**	26-FEB-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25	**30-JAN-2015**	**09-FEB-2015**	27-FEB-2015	✓	**10-FEB-2015**	27-FEB-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS - Continued							
BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35, BH10 0-0.2, BH10 0.8-1, BH11 0.2-0.4, BH11 1.6-1.8, BH11 2.4-2.6, BH13 0-0.15, BH15 0.6-0.7, BH16 0.6-0.8, BH16 1.4-1.6, BH5 0.3-0.4, BH5 0.4-0.5, BH6 0-0.1, BH6 0.4-0.5, BH8 0.5-0.6, BH8 2.2-2.4, BH9 1.9-2.1	**30-JAN-2015**	**10-FEB-2015**	27-FEB-2015	✓	**11-FEB-2015**	27-FEB-2015	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6, BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**05-FEB-2015**	16-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP066)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**05-FEB-2015**	12-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP066)							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25, BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP066)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB) - Continued								
BH10 0-0.2,	BH10 0.8-1,	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	17-MAR-2015	✓
BH11 0.2-0.4,	BH11 1.6-1.8,							
BH11 2.4-2.6,	BH13 0-0.15,							
BH15 0.6-0.7,	BH16 0.6-0.8,							
BH16 1.4-1.6,	BH5 0.3-0.4,							
BH5 0.4-0.5,	BH6 0-0.1,							
BH6 0.4-0.5,	BH8 0.5-0.6,							
BH8 2.2-2.4,	BH9 1.9-2.1							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6, BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**05-FEB-2015**	16-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP068)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**05-FEB-2015**	12-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP068)							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25, BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP068)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC) - Continued								
BH10 0-0.2,	BH10 0.8-1,	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	17-MAR-2015	✓
BH11 0.2-0.4,	BH11 1.6-1.8,							
BH11 2.4-2.6,	BH13 0-0.15,							
BH15 0.6-0.7,	BH16 0.6-0.8,							
BH16 1.4-1.6,	BH5 0.3-0.4,							
BH5 0.4-0.5,	BH6 0-0.1,							
BH6 0.4-0.5,	BH8 0.5-0.6,							
BH8 2.2-2.4,	BH9 1.9-2.1							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6, BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**05-FEB-2015**	16-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP071)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**05-FEB-2015**	12-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP071)							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25, BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP071)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons - Continued								
BH10 0-0.2,	BH10 0.8-1,	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	17-MAR-2015	✓
BH11 0.2-0.4,	BH11 1.6-1.8,							
BH11 2.4-2.6,	BH13 0-0.15,							
BH15 0.6-0.7,	BH16 0.6-0.8,							
BH16 1.4-1.6,	BH5 0.3-0.4,							
BH5 0.4-0.5,	BH6 0-0.1,							
BH6 0.4-0.5,	BH8 0.5-0.6,							
BH8 2.2-2.4,	BH9 1.9-2.1							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6, BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**05-FEB-2015**	16-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**05-FEB-2015**	12-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25, BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**06-FEB-2015**	17-MAR-2015	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
BH10 0-0.2,	BH10 0.8-1,	**30-JAN-2015**	**05-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	17-MAR-2015	✓
BH11 0.2-0.4,	BH11 1.6-1.8,							
BH11 2.4-2.6,	BH13 0-0.15,							
BH15 0.6-0.7,	BH16 0.6-0.8,							
BH16 1.4-1.6,	BH5 0.3-0.4,							
BH5 0.4-0.5,	BH6 0-0.1,							
BH6 0.4-0.5,	BH8 0.5-0.6,							
BH8 2.2-2.4,	BH9 1.9-2.1							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
BHD 0.3-0.4,	BHD 0.7-0.8,	**02-FEB-2015**	**04-FEB-2015**	16-FEB-2015	✓	**10-FEB-2015**	16-FEB-2015	✓
BHE 0-0.15,	BHE 0.2-0.3,							
BHF 0.5-0.6,	BHG 0-0.2,							
BHG 0.4-0.6,	BHG 0.8-0.9,							
BHG 1.2-1.3,	BHG 2.1-2.2,							
FD3,	FD4,							
BHA 0.5-0.6,	BHA 1-1.2,							
BHA 1.8-2,	BHB 0.2-0.4,							
BHB 1.2-1.4,	BHB 2-2.2,							
BHC 0-0.2,	BHC 0.4-0.6,							
BH20 0.25-0.4,	BH20 0.45-0.55,							
BH21 0-0.2								
Soil Glass Jar - Unpreserved (EP080)								
GW1 2.6-2.7,	GW2 0.1-0.2,	**29-JAN-2015**	**04-FEB-2015**	12-FEB-2015	✓	**10-FEB-2015**	12-FEB-2015	✓
GW2 1.7-1.75,	GW3 0.2-0.3,							
GW3 0.5-0.6,	GW1 0.2-0.3,							
GW1 0.4-0.45								
Soil Glass Jar - Unpreserved (EP080)								
BH10 0-0.2,	BH10 0.8-1,	**30-JAN-2015**	**04-FEB-2015**	13-FEB-2015	✓	**07-FEB-2015**	13-FEB-2015	✓
BH11 0.2-0.4,	BH11 1.6-1.8,							
BH11 2.4-2.6,	BH13 0-0.15,							
BH15 0.6-0.7,	BH16 0.6-0.8,							
BH16 1.4-1.6,	BH5 0.3-0.4,							
BH5 0.4-0.5,	BH6 0-0.1,							
BH6 0.4-0.5,	BH8 0.5-0.6,							
BH8 2.2-2.4,	BH9 1.9-2.1							
Soil Glass Jar - Unpreserved (EP080)								

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN - Continued								
BH2 0.1-0.2,	BH2 0.7-0.8,	**30-JAN-2015**	**04-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	13-FEB-2015	✓
BH3 0.3-0.4,	BH3 1.0-1.2,							
BH4 0.8-1,	FD1,							
FD2,	BH38 0.3-0.4,							
BH38 0.4-0.5,	BH39 0-0.2,							
BH41 0.25-0.35,	BH27 0.4-0.6,							
BH22 1-1.25,	BH24 0-0.1,							
BH25 0.6-0.8,	BH25 1-1.2,							
BH25 1.6-1.8,	BH26 0.2-0.4,							
BH30 0.8-0.9,	BH31 0-0.2,							
BH32 0-0.2,	BH34 0.4-0.5,							
BH36 0.1-0.2,	BH37 0.3-0.4,							
BH17 1.5-1.6,	BH18 0-0.2,							
BH18 0.6-0.8,	BH19 0.05-0.2,							
BH19 0.2-0.3,	BH22 0.23-0.35							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
BHD 0.3-0.4, BHD 0.7-0.8, BHE 0-0.15, BHE 0.2-0.3, BHF 0.5-0.6, BHG 0-0.2, BHG 0.4-0.6, BHG 0.8-0.9, BHG 1.2-1.3, BHG 2.1-2.2, FD3, FD4, BHA 0.5-0.6, BHA 1-1.2, BHA 1.8-2, BHB 0.2-0.4, BHB 1.2-1.4, BHB 2-2.2, BHC 0-0.2, BHC 0.4-0.6, BH20 0.25-0.4, BH20 0.45-0.55, BH21 0-0.2	**02-FEB-2015**	**04-FEB-2015**	16-FEB-2015	✓	**10-FEB-2015**	16-FEB-2015	✓
Soil Glass Jar - Unpreserved (EP080)							
GW1 2.6-2.7, GW2 0.1-0.2, GW2 1.7-1.75, GW3 0.2-0.3, GW3 0.5-0.6, GW1 0.2-0.3, GW1 0.4-0.45	**29-JAN-2015**	**04-FEB-2015**	12-FEB-2015	✓	**10-FEB-2015**	12-FEB-2015	✓
Soil Glass Jar - Unpreserved (EP080)							
BH10 0-0.2, BH10 0.8-1, BH11 0.2-0.4, BH11 1.6-1.8, BH11 2.4-2.6, BH13 0-0.15, BH15 0.6-0.7, BH16 0.6-0.8, BH16 1.4-1.6, BH5 0.3-0.4, BH5 0.4-0.5, BH6 0-0.1, BH6 0.4-0.5, BH8 0.5-0.6, BH8 2.2-2.4, BH9 1.9-2.1	**30-JAN-2015**	**04-FEB-2015**	13-FEB-2015	✓	**07-FEB-2015**	13-FEB-2015	✓
Soil Glass Jar - Unpreserved (EP080)							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons - Continued							
BH2 0.1-0.2, BH2 0.7-0.8, BH3 0.3-0.4, BH3 1.0-1.2, BH4 0.8-1, FD1, FD2, BH38 0.3-0.4, BH38 0.4-0.5, BH39 0-0.2, BH41 0.25-0.35, BH27 0.4-0.6, BH22 1-1.25, BH24 0-0.1, BH25 0.6-0.8, BH25 1-1.2, BH25 1.6-1.8, BH26 0.2-0.4, BH30 0.8-0.9, BH31 0-0.2, BH32 0-0.2, BH34 0.4-0.5, BH36 0.1-0.2, BH37 0.3-0.4, BH17 1.5-1.6, BH18 0-0.2, BH18 0.6-0.8, BH19 0.05-0.2, BH19 0.2-0.3, BH22 0.23-0.35	**30-JAN-2015**	**04-FEB-2015**	13-FEB-2015	✓	**10-FEB-2015**	13-FEB-2015	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**---**	03-FEB-2015	----	**04-FEB-2015**	03-FEB-2015	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**---**	03-MAR-2015	----	**04-FEB-2015**	03-MAR-2015	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**---**	02-AUG-2015	----	**07-FEB-2015**	02-AUG-2015	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**---**	03-MAR-2015	----	**10-FEB-2015**	03-MAR-2015	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**04-FEB-2015**	10-FEB-2015	✓	**08-FEB-2015**	16-MAR-2015	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**09-FEB-2015**	17-FEB-2015	✓	**09-FEB-2015**	17-FEB-2015	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP080)							
GW1, GW2, GW3, DUP1	**03-FEB-2015**	**09-FEB-2015**	17-FEB-2015	✓	**09-FEB-2015**	17-FEB-2015	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	11	103	10.7	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	8	79	10.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	8	79	10.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	8	79	10.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	8	79	10.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	8	80	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	8	79	10.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	8	80	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	4	79	5.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	4	80	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Conductivity by PC Titrator	EA010-P	2	19	**10.5**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	2	19	**10.5**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	19	**10.5**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
pH by PC Titrator	EA005-P	2	20	**10.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	2	20	**10.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Conductivity by PC Titrator	EA010-P	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Conductivity by PC Titrator	EA010-P	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.0**	**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
Moisture Content	EA055-103	SOIL	In-house. 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).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 21st ed., 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(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 SnCl2 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)
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)
TRH - 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 - C40.
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)
TRH 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.
pH by PC Titrator	EA005-P	WATER	In house: Referenced to APHA 21st ed. 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM (2013) Schedule B(3)
Conductivity by PC Titrator	EA010-P	WATER	In house: Referenced to APHA 21st ed., 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM (2013) Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 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)
TRH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
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	ORG17	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.

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 SW 846 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

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075(SIM)S: Phenolic Compound Surrogates	ES1502429-021	BHG 0.4-0.6	**Phenol-d6**	13127-88-3	124 %	63-123 %	**Recovery greater than upper data quality objective**
EP075(SIM)S: Phenolic Compound Surrogates	ES1502429-045	BH24 0-0.1	**Phenol-d6**	13127-88-3	123 %	63-123 %	**Recovery greater than upper data quality objective**
EP075(SIM)S: Phenolic Compound Surrogates	ES1502429-013	BH3 1.0-1.2	**2.4.6-Tribromophenol**	118-79-6	31.8 %	40-138 %	**Recovery less than lower data quality objective**
EP075(SIM)S: Phenolic Compound Surrogates	ES1502429-017	BHE 0-0.15	**2.4.6-Tribromophenol**	118-79-6	15.9 %	40-138 %	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural						
GW1, GW2, GW3, DUP1	----	----	----	04-FEB-2015	03-FEB-2015	**1**

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.**

QUALITY CONTROL REPORT

Work Order	: **ES1502429**	Page	: 1 of 39
Client	: **GREENCAP NAA**	Laboratory	: Environmental Division Sydney
Contact	: MS NAOMI PRICE	Contact	: Client Services
Address	: LEVEL 2, 11 KHARTOUM ROAD NORTH RYDE NSW, AUSTRALIA 2190	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: naomi.price@noel-arnold.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 98891800	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 98891811	Facsimile	: +61-2-8784 8500
Project	: J130282	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 03-FEB-2015
Sampler	: NP	Issue Date	: 12-FEB-2015
Order number	: J130282		
		No. of samples received	: 105
Quote number	: EN/074/14	No. of samples analysed	: 80

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

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

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
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
		Sydney Organics
Phalak Inthakesone	Laboratory Manager - Organics	Sydney Inorganics
Shobhna Chandra	Metals Coordinator	Sydney Inorganics

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 (%)
EA055: Moisture Content (QC Lot: 3809934)									
ES1502422-030	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	18.0	17.5	2.5	0% - 50%
ES1502429-014	BH4 0.8-1	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	18.6	16.9	9.2	0% - 50%
EA055: Moisture Content (QC Lot: 3809935)									
ES1502429-023	BHG 1.2-1.3	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	15.1	14.7	3.0	0% - 50%
ES1502439-011	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	11.8	12.4	5.2	0% - 50%
EA055: Moisture Content (QC Lot: 3811405)									
ES1502408-003	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	18.8	17.0	10.0	0% - 50%
ES1502429-033	BHA 1.8-2	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	13.3	16.3	20.1	0% - 50%
EA055: Moisture Content (QC Lot: 3811406)									
ES1502429-042	BH41 0.25-0.35	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	14.2	13.4	6.1	0% - 50%
ES1502429-053	BH34 0.4-0.5	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	12.6	12.0	4.7	0% - 50%
EA055: Moisture Content (QC Lot: 3811407)									
ES1502429-062	BH20 0.45-0.55	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	10.4	11.6	10.9	0% - 50%
ES1502429-073	BH16 1.4-1.6	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	17.0	18.1	6.3	0% - 50%
EA055: Moisture Content (QC Lot: 3811408)									
ES1502483-002	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	9.6	10.3	6.9	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 3816089)									
ES1502429-005	GW1 2.6-2.7	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	9	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	12	7	50.9	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	35	44	23.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	9	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	11	12.9	No Limit
ES1502429-015	BHD 0.3-0.4	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	17	29.9	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	12	8	38.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	28	23	21.9	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	25	9	89.1	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3816091)									
ES1502429-025	GW1 0.2-0.3	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	81	96	16.4	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	96	99	2.4	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 (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 3816091) - continued									
ES1502429-025	GW1 0.2-0.3	EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	29	30	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	43	49	12.1	No Limit
ES1502429-035	BHB 1.2-1.4	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	28	26	6.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	36	36	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	21	22	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	28	28	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3817019)									
ES1502233-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	8	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	11	13	11.7	No Limit
ES1502429-051	BH31 0-0.2	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	117	118	1.4	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	114	116	1.8	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	31	31	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	50	55	9.8	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 3817021)									
ES1502429-061	BH20 0.25-0.4	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	17	24.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	39	29	28.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	44	34	23.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	14	17	22.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	36	32	12.9	No Limit
ES1502429-071	BH15 0.6-0.7	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	16	21	31.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	9	21.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	63	87	31.6	0% - 50%

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 3817021) - continued									
ES1502429-071	BH15 0.6-0.7	EG005T: Zinc	7440-66-6	5	mg/kg	18	21	17.4	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3816090)									
ES1502429-005	GW1 2.6-2.7	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-015	BHD 0.3-0.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3816092)									
ES1502429-025	GW1 0.2-0.3	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3817020)									
ES1502233-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-051	BH31 0-0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3817022)									
ES1502429-061	BH20 0.25-0.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-071	BH15 0.6-0.7	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3809435)									
ES1502429-005	GW1 2.6-2.7	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-015	BHD 0.3-0.4	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3809441)									
ES1502429-025	GW1 0.2-0.3	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3809445)									
ES1502429-045	BH24 0-0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3809451)									
ES1502429-065	BH10 0-0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809434)									
ES1502429-005	GW1 2.6-2.7	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
		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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809434) - continued									
ES1502429-005	GW1 2.6-2.7	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
ES1502429-015	BHD 0.3-0.4	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
		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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809440)									
ES1502429-025	GW1 0.2-0.3	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 sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809440) - continued									
ES1502429-025	GW1 0.2-0.3	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
ES1502429-035	BHB 1.2-1.4	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
		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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809444)									
ES1502429-045	BH24 0-0.1	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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809444) - continued									
ES1502429-045	BH24 0-0.1	EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	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
		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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3809450)									
ES1502429-065	BH10 0-0.2	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

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: 3809450) - continued									
ES1502429-065	BH10 0-0.2	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	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
		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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809437)									
ES1502429-005	GW1 2.6-2.7	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	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 (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809437) - continued									
ES1502429-005	GW1 2.6-2.7	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1502429-015	BHD 0.3-0.4	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809443)									
ES1502429-025	GW1 0.2-0.3	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	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 (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809443) - continued									
ES1502429-025	GW1 0.2-0.3	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809447)									
ES1502429-045	BH24 0-0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	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 (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809447) - continued									
ES1502429-045	BH24 0-0.1	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809453)									
ES1502429-065	BH10 0-0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	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 (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3809453) - continued									
ES1502429-065	BH10 0-0.2	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809416)									
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	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 (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809416) - continued									
ES1502429-015	BHD 0.3-0.4	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809419)									
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809420)									
ES1502429-045	BH24 0-0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809436)									
ES1502429-005	GW1 2.6-2.7	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1502429-015	BHD 0.3-0.4	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809442)									
ES1502429-025	GW1 0.2-0.3	EP071: C15 - C28 Fraction	----	100	mg/kg	130	110	12.6	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	230	280	18.5	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809446)									
ES1502429-045	BH24 0-0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	EP071: C15 - C28 Fraction	----	100	mg/kg	100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809452)									
ES1502429-065	BH10 0-0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3809454)									
ES1502429-065	BH10 0-0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3809416)									

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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3809416) - continued									
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-015	BHD 0.3-0.4	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3809419)									
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3809420)									
ES1502429-045	BH24 0-0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-055	BH37 0.3-0.4	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3809436)									
ES1502429-005	GW1 2.6-2.7	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
ES1502429-015	BHD 0.3-0.4	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 Fractions (QC Lot: 3809442)									
ES1502429-025	GW1 0.2-0.3	EP071: >C16 - C34 Fraction	----	100	mg/kg	300	280	8.2	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	310	370	17.9	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
ES1502429-035	BHB 1.2-1.4	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 Fractions (QC Lot: 3809446)									
ES1502429-045	BH24 0-0.1	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
ES1502429-055	BH37 0.3-0.4	EP071: >C16 - C34 Fraction	----	100	mg/kg	130	<100	24.9	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 Fractions (QC Lot: 3809452)									
ES1502429-065	BH10 0-0.2	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
ES1502429-074	BH5 0.3-0.4	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 Fractions (QC Lot: 3809454)									
ES1502429-065	BH10 0-0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1502429-074	BH5 0.3-0.4	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	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 (%)*
EP080: BTEXN (QC Lot: 3809416)									
ES1502429-005	GW1 2.6-2.7	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
ES1502429-015	BHD 0.3-0.4	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 3809419)									
ES1502429-025	GW1 0.2-0.3	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
ES1502429-035	BHB 1.2-1.4	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 3809420)									
ES1502429-045	BH24 0-0.1	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
ES1502429-055	BH37 0.3-0.4	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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 3809420) - continued									
ES1502429-055	BH37 0.3-0.4	EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 3809454)									
ES1502429-065	BH10 0-0.2	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
ES1502429-074	BH5 0.3-0.4	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA005P: pH by PC Titrator (QC Lot: 3810124)									
ES1502397-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.25	7.24	0.1	0% - 20%
ES1502485-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	7.57	7.98	5.3	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 3810123)									
ES1502231-020	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1270	1270	0.0	0% - 20%
ES1502485-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	10500	10500	0.09	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3814559)									
ES1502416-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.06	0.05	0.0	No Limit
ES1502416-011	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3814559) - continued									
ES1502416-011	Anonymous	EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.008	0.007	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.20	0.20	0.0	0% - 20%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.10	0.10	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3814558)									
ES1502416-003	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES1502416-010	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3813882)									
ES1502372-013	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES1502429-002	GW2	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3813882)									
ES1502372-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES1502429-002	GW2	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3813882)									
ES1502372-013	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES1502429-002	GW2	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	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 Spike (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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3816089)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	104	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	97.0	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	90.6	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	100	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	97.6	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	101	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	97.4	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3816091)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	106	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	101	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	93.1	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	104	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	100	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	106	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	103	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3817019)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	112	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	102	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	97.1	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	112	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	99.7	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	109	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	109	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3817021)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	109	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	104	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	99.5	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	107	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	106	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	110	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	107	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816090)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816090) - continued								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	92.7	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816092)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	96.9	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817020)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	90.1	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817022)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	88.6	70	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809435)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	105	57.4	117
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809441)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	100	57.4	117
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809445)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	104	57.4	117
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809451)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	104	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809434)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	101	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	86.5	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	74.4	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	77.8	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	66	118
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	76	120
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	113	60	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	106	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	65	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809434) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	106	65	129
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809440)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.4	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	66	118
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	76	120
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	105	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	60	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	85.5	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.8	65	123
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	92.2	65	129
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809444)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	102	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.2	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	108	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	108	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	104	66	118

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809444) - continued								
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	76	120
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	108	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.9	60	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	97.6	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	65	123
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	84.0	65	129
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809450)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	103	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.3	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	109	66	118
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	76	120
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	60	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	100	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	105	65	123
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	74.0	65	129
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809437)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	86.8	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	86.6	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	82.8	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	85.5	77	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809437) - continued								
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	83.8	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	83.9	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	84.1	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	84.1	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	81.8	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	84.0	81	123
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	4 mg/kg	76.5	70	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	84.1	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	82.7	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	78.4	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	78.0	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	80.8	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809443)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	88.4	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	92.2	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	93.5	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	91.2	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	88.2	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	89.6	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	87.2	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	88.3	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	82.4	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	83.2	81	123
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	4 mg/kg	82.0	70	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	81.6	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	83.8	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	80.2	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	82.9	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	81.5	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809447)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	88.4	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	88.0	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	85.3	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	86.0	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	84.9	79	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809447) - continued								
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	84.8	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	82.9	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	83.6	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	85.0	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	86.3	81	123
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	4 mg/kg	90.7	70	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	97.3	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	86.5	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	94.0	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	93.2	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	95.4	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809453)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	85.3	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	83.7	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	80.2	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	84.2	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	85.6	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	88.3	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	83.2	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	83.8	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	83.6	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	85.3	81	123
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	4 mg/kg	82.4	70	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	84.6	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	89.4	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	74.5	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	73.0	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	75.4	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809416)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	89.4	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809419)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	98.3	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809420)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	98.5	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809436)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809436) - continued								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	107	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	95.9	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	105	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809442)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	104	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	104	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	103	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809446)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	85.9	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	103	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	118	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809452)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	96.9	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	95.2	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	93.9	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809454)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	90.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809416)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	88.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809419)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	97.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809420)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	96.1	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809436)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	99.1	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	104	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	97.2	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809442)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	96.7	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	103	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	102	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809446)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	96.8	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	114	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	105	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809452)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809452) - continued								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	101	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	99.3	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	95.9	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809454)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	92.3	68.4	128
EP080: BTEXN (QCLot: 3809416)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	88.0	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	86.9	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	80.7	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	80.7	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	86.0	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	82.1	62	138
EP080: BTEXN (QCLot: 3809419)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	93.3	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	94.1	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	89.0	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	90.8	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	92.8	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	95.1	62	138
EP080: BTEXN (QCLot: 3809420)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.2	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	93.1	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	89.7	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	92.1	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	92.5	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	85.0	62	138
EP080: BTEXN (QCLot: 3809454)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	84.0	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	86.7	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	80.8	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	81.3	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	85.7	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	82.1	62	138

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EA010P: Conductivity by PC Titrator (QCLot: 3810123)								
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	2000 µS/cm	105	95	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 3814559)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	93.5	85	115
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.2	85	115
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	98.0	85	115
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	94.4	85	115
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	97.0	85	115
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	97.0	85	115
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	97.8	85	115
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	96.6	85	115
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	98.8	85	115
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	90.3	85	115
EG035F: Dissolved Mercury by FIMS (QCLot: 3814558)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	96.2	78	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809349)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	2000 µg/L	98.0	59	129
EP071: C15 - C28 Fraction	----	100	µg/L	<100	3000 µg/L	98.0	71	131
EP071: C29 - C36 Fraction	----	50	µg/L	<50	2000 µg/L	99.0	62	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3813882)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	111	75	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809349)								
EP071: >C10 - C16 Fraction	>C10_C16	100	µg/L	<100	2500 µg/L	97.2	58.9	131
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	3500 µg/L	92.6	73.9	138
EP071: >C34 - C40 Fraction	----	50	µg/L	<100	1500 µg/L	96.7	67	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3813882)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	112	75	127
EP080: BTEXN (QCLot: 3813882)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	116	70	124
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	117	65	129
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	108	70	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	108	69	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	111	72	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	111	70	124

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	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3816089)							
ES1502429-005	GW1 2.6-2.7	EG005T: Arsenic	7440-38-2	50 mg/kg	95.3	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.7	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	107	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	106	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.3	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	98.8	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3816091)							
ES1502429-025	GW1 0.2-0.3	EG005T: Arsenic	7440-38-2	50 mg/kg	91.5	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.5	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	113	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	106	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	93.0	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.0	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	91.5	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3817019)							
ES1502233-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	107	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	107	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	100	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	107	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	101	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3817021)							
ES1502429-061	BH20 0.25-0.4	EG005T: Arsenic	7440-38-2	50 mg/kg	105	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.4	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	110	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	113	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.4	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	105	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.5	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816090)							
ES1502429-005	GW1 2.6-2.7	EG035T: Mercury	7439-97-6	5 mg/kg	99.6	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816092)							

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
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816092) - continued							
ES1502429-025	GW1 0.2-0.3	EG035T: Mercury	7439-97-6	5 mg/kg	103	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817020)							
ES1502233-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817022)							
ES1502429-061	BH20 0.25-0.4	EG035T: Mercury	7439-97-6	5 mg/kg	94.5	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809435)							
ES1502429-005	GW1 2.6-2.7	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	96.2	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809441)							
ES1502429-025	GW1 0.2-0.3	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	104	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809445)							
ES1502429-045	BH24 0-0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	90.3	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809451)							
ES1502429-065	BH10 0-0.2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	99.4	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809434)							
ES1502429-005	GW1 2.6-2.7	EP068: gamma-BHC	58-89-9	0.5 mg/kg	107	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.5	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	103	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70	130
		EP068: Endrin	72-20-8	2 mg/kg	97.5	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	83.1	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809440)							
ES1502429-025	GW1 0.2-0.3	EP068: gamma-BHC	58-89-9	0.5 mg/kg	95.3	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	86.8	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	101	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	70	130
		EP068: Endrin	72-20-8	2 mg/kg	92.0	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	80.5	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809444)							
ES1502429-045	BH24 0-0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	103	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	94.3	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	102	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	97.0	70	130
		EP068: Endrin	72-20-8	2 mg/kg	87.2	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	90.3	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
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809450)							
ES1502429-065	BH10 0-0.2	EP068: gamma-BHC	58-89-9	0.5 mg/kg	105	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	101	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	106	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	70	130
		EP068: Endrin	72-20-8	2 mg/kg	98.9	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	81.2	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809437)							
ES1502429-005	GW1 2.6-2.7	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	111	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809443)							
ES1502429-025	GW1 0.2-0.3	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	83.6	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	100	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809447)							
ES1502429-045	BH24 0-0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	114	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809453)							
ES1502429-065	BH10 0-0.2	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	81.4	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809416)							
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.1	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809419)							
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C9 Fraction	----	32.5 mg/kg	112	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809420)							
ES1502429-045	BH24 0-0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	122	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809436)							
ES1502429-005	GW1 2.6-2.7	EP071: C10 - C14 Fraction	----	560 mg/kg	97.0	73	137
		EP071: C15 - C28 Fraction	----	2370 mg/kg	115	53	131
		EP071: C29 - C36 Fraction	----	1695 mg/kg	114	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809442)							
ES1502429-025	GW1 0.2-0.3	EP071: C10 - C14 Fraction	----	640 mg/kg	103	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	122	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	117	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809446)							
ES1502429-045	BH24 0-0.1	EP071: C10 - C14 Fraction	----	560 mg/kg	96.6	73	137

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: 3809446) - continued							
ES1502429-045	BH24 0-0.1	EP071: C15 - C28 Fraction	----	2370 mg/kg	117	53	131
		EP071: C29 - C36 Fraction	----	1695 mg/kg	102	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809452)							
ES1502429-065	BH10 0-0.2	EP071: C10 - C14 Fraction	----	560 mg/kg	96.0	73	137
		EP071: C15 - C28 Fraction	----	2370 mg/kg	108	53	131
		EP071: C29 - C36 Fraction	----	1695 mg/kg	110	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809454)							
ES1502429-065	BH10 0-0.2	EP080: C6 - C9 Fraction	----	32.5 mg/kg	89.4	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809416)							
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	94.2	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809419)							
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	108	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809420)							
ES1502429-045	BH24 0-0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	120	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809436)							
ES1502429-005	GW1 2.6-2.7	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	99.4	73	137
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	118	53	131
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	125	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809442)							
ES1502429-025	GW1 0.2-0.3	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	127	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	119	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	106	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809446)							
ES1502429-045	BH24 0-0.1	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	104	73	137
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	112	53	131
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	105	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809452)							
ES1502429-065	BH10 0-0.2	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	100	73	137
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	126	53	131
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	97.0	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809454)							
ES1502429-065	BH10 0-0.2	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	88.2	70	130
EP080: BTEXN (QCLot: 3809416)							
ES1502429-005	GW1 2.6-2.7	EP080: Benzene	71-43-2	2.5 mg/kg	81.2	70	130

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 3809416) - continued							
ES1502429-005	GW1 2.6-2.7	EP080: Toluene	108-88-3	2.5 mg/kg	81.5	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	79.2	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	78.6	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	79.9	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	79.5	70	130
EP080: BTEXN (QCLot: 3809419)							
ES1502429-025	GW1 0.2-0.3	EP080: Benzene	71-43-2	2.5 mg/kg	79.8	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	86.5	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	83.8	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	87.1	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.0	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.8	70	130
EP080: BTEXN (QCLot: 3809420)							
ES1502429-045	BH24 0-0.1	EP080: Benzene	71-43-2	2.5 mg/kg	106	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	109	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	110	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	111	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	110	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	98.2	70	130
EP080: BTEXN (QCLot: 3809454)							
ES1502429-065	BH10 0-0.2	EP080: Benzene	71-43-2	2.5 mg/kg	74.3	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	76.7	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	75.5	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	75.3	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	76.1	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	74.9	70	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3814559)							
ES1502416-004	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	116	70	130
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	100	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3814559) - continued							
ES1502416-004	Anonymous	EG020A-F: Chromium	7440-47-3	0.2 mg/L	91.5	70	130
		EG020A-F: Copper	7440-50-8	0.2 mg/L	105	70	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	99.0	70	130
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	103	70	130
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	99.0	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3814558)							
ES1502416-001	Anonymous	EG035F: Mercury	7439-97-6	0.0100 mg/L	83.5	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3813882)							
ES1502372-013	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	119	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3813882)							
ES1502372-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	119	70	130
EP080: BTEXN (QCLot: 3813882)							
ES1502372-013	Anonymous	EP080: Benzene	71-43-2	25 µg/L	87.0	70	130
		EP080: Toluene	108-88-3	25 µg/L	99.7	70	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	102	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	101	70	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	99.0	70	130
		EP080: Naphthalene	91-20-3	25 µg/L	105	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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809416)										
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.1	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809416)										
ES1502429-005	GW1 2.6-2.7	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	94.2	----	70	130	----	----
EP080: BTEXN (QCLot: 3809416)										
ES1502429-005	GW1 2.6-2.7	EP080: Benzene	71-43-2	2.5 mg/kg	81.2	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	81.5	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	79.2	----	70	130	----	----

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
EP080: BTEXN (QCLot: 3809416) - continued										
ES1502429-005	GW1 2.6-2.7	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	78.6	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	79.9	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	79.5	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809419)										
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C9 Fraction	----	32.5 mg/kg	112	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809419)										
ES1502429-025	GW1 0.2-0.3	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	108	----	70	130	----	----
EP080: BTEXN (QCLot: 3809419)										
ES1502429-025	GW1 0.2-0.3	EP080: Benzene	71-43-2	2.5 mg/kg	79.8	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	86.5	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	83.8	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	87.1	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.0	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.8	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809420)										
ES1502429-045	BH24 0-0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	122	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809420)										
ES1502429-045	BH24 0-0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	120	----	70	130	----	----
EP080: BTEXN (QCLot: 3809420)										
ES1502429-045	BH24 0-0.1	EP080: Benzene	71-43-2	2.5 mg/kg	106	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	109	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	110	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	111	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	110	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	98.2	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809434)										
ES1502429-005	GW1 2.6-2.7	EP068: gamma-BHC	58-89-9	0.5 mg/kg	107	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.5	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	103	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	97.5	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	83.1	----	70	130	----	----

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
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809435)										
ES1502429-005	GW1 2.6-2.7	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	96.2	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809436)										
ES1502429-005	GW1 2.6-2.7	EP071: C10 - C14 Fraction	----	560 mg/kg	97.0	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	2370 mg/kg	115	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	1695 mg/kg	114	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809436)										
ES1502429-005	GW1 2.6-2.7	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	99.4	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	118	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	125	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809437)										
ES1502429-005	GW1 2.6-2.7	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.5	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	111	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809440)										
ES1502429-025	GW1 0.2-0.3	EP068: gamma-BHC	58-89-9	0.5 mg/kg	95.3	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	86.8	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	101	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	92.0	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	80.5	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809441)										
ES1502429-025	GW1 0.2-0.3	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	104	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809442)										
ES1502429-025	GW1 0.2-0.3	EP071: C10 - C14 Fraction	----	640 mg/kg	103	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	122	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	117	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809442)										
ES1502429-025	GW1 0.2-0.3	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	127	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	119	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	106	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809443)										
ES1502429-025	GW1 0.2-0.3	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	83.6	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	100	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809444)										
ES1502429-045	BH24 0-0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	103	----	70	130	----	----

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: 3809444) - continued										
ES1502429-045	BH24 0-0.1	EP068: Heptachlor	76-44-8	0.5 mg/kg	94.3	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	102	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	97.0	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	87.2	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	90.3	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809445)										
ES1502429-045	BH24 0-0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	90.3	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809446)										
ES1502429-045	BH24 0-0.1	EP071: C10 - C14 Fraction	----	560 mg/kg	96.6	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	2370 mg/kg	117	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	1695 mg/kg	102	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809446)										
ES1502429-045	BH24 0-0.1	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	104	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	112	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	105	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809447)										
ES1502429-045	BH24 0-0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.5	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	114	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3809450)										
ES1502429-065	BH10 0-0.2	EP068: gamma-BHC	58-89-9	0.5 mg/kg	105	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	101	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	106	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	98.9	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	81.2	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3809451)										
ES1502429-065	BH10 0-0.2	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	99.4	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809452)										
ES1502429-065	BH10 0-0.2	EP071: C10 - C14 Fraction	----	560 mg/kg	96.0	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	2370 mg/kg	108	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	1695 mg/kg	110	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809452)										
ES1502429-065	BH10 0-0.2	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	100	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	126	----	53	131	----	----

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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809452) - continued										
ES1502429-065	BH10 0-0.2	EP071: >C34 - C40 Fraction	----	1087 mg/kg	97.0	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3809453)										
ES1502429-065	BH10 0-0.2	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	81.4	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.8	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3809454)										
ES1502429-065	BH10 0-0.2	EP080: C6 - C9 Fraction	----	32.5 mg/kg	89.4	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3809454)										
ES1502429-065	BH10 0-0.2	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	88.2	----	70	130	----	----
EP080: BTEXN (QCLot: 3809454)										
ES1502429-065	BH10 0-0.2	EP080: Benzene	71-43-2	2.5 mg/kg	74.3	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	76.7	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	75.5	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	75.3	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	76.1	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	74.9	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3816089)										
ES1502429-005	GW1 2.6-2.7	EG005T: Arsenic	7440-38-2	50 mg/kg	95.3	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.7	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	107	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	106	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	97.3	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	101	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	98.8	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816090)										
ES1502429-005	GW1 2.6-2.7	EG035T: Mercury	7439-97-6	5 mg/kg	99.6	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3816091)										
ES1502429-025	GW1 0.2-0.3	EG005T: Arsenic	7440-38-2	50 mg/kg	91.5	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.5	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	113	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	106	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	93.0	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	94.0	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	91.5	----	70	130	----	----

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
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3816092)										
ES1502429-025	GW1 0.2-0.3	EG035T: Mercury	7439-97-6	5 mg/kg	103	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3817019)										
ES1502233-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	107	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	106	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	107	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	100	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	107	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	101	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817020)										
ES1502233-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3817021)										
ES1502429-061	BH20 0.25-0.4	EG005T: Arsenic	7440-38-2	50 mg/kg	105	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.4	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	110	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	113	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	97.4	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	105	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	99.5	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3817022)										
ES1502429-061	BH20 0.25-0.4	EG035T: Mercury	7439-97-6	5 mg/kg	94.5	----	70	130	----	----

Sub-Matrix: **WATER**

				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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3813882)										
ES1502372-013	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	119	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3813882)										
ES1502372-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	119	----	70	130	----	----
EP080: BTEXN (QCLot: 3813882)										
ES1502372-013	Anonymous	EP080: Benzene	71-43-2	25 µg/L	87.0	----	70	130	----	----
		EP080: Toluene	108-88-3	25 µg/L	99.7	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	25 µg/L	102	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	101	----	70	130	----	----

Sub-Matrix: **WATER**

				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
EP080: BTEXN (QCLot: 3813882) - continued										
ES1502372-013	Anonymous	EP080: ortho-Xylene	95-47-6	25 µg/L	99.0	----	70	130	----	----
		EP080: Naphthalene	91-20-3	25 µg/L	105	----	70	130	----	----
EG035F: Dissolved Mercury by FIMS (QCLot: 3814558)										
ES1502416-001	Anonymous	EG035F: Mercury	7439-97-6	0.0100 mg/L	83.5	----	70	130	----	----
EG020F: Dissolved Metals by ICP-MS (QCLot: 3814559)										
ES1502416-004	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	116	----	70	130	----	----
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	100	----	70	130	----	----
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	91.5	----	70	130	----	----
		EG020A-F: Copper	7440-50-8	0.2 mg/L	105	----	70	130	----	----
		EG020A-F: Lead	7439-92-1	0.2 mg/L	99.0	----	70	130	----	----
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	103	----	70	130	----	----
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	99.0	----	70	130	----	----

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET42851/ 46031 / 1 - 21
Your ref : J130282
NATA Accreditation No: 14484

9 February 2015

Greencap | NAA
Level 2, 11 Khartoum Road
North Ryde NSW 2113

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

Attn: Ms Naomi Price

Dear Naomi

Asbestos Identification
This report presents the results of twenty-one from fifty samples, forwarded by Greencap| NAA on 5 February 2015, for analysis for asbestos.

1.Introduction: Twenty-one samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1 and Australian Standard AS 4964 - 2004).**

The report also provides approximate weights and percentages, categories of asbestos forms appearing in the sample, such as **AF**(Asbestos Fines), **FA**(Friable Asbestos and **ACM** (Asbestos Containing Material), also satisfying the requirements$^{\Omega}$ of the WA/ NEPM Guidelines)

3. Results :

Sample No. 1. ASET42851 / 46031 / 1. BHA 0.3 - 0.6.
Approx dimensions 5.5 cm x 4.5 cm x 3.5 cm
Approx total weight of sample = 97.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

Sample No. 2. ASET42851 / 46031 / 2. BHB 0.2 - 0.4.
Approx dimensions 6.0 cm x 4.8 cm x 3.5 cm
Approx total weight of sample = 108.0g
The sample consisted of a mixture of sandy soil, stones, plant matter, fragments of bitumen, glass, paint flakes and brick.
No asbestos detected.

Sample No. 3. ASET42851 / 46031 / 3. BHC 0.0 - 0.2.
Approx dimensions 6.5 cm x 5.0 cm x 3.8 cm
Approx total weight of sample = 141.0g
The sample consisted of a mixture of sandy soil, stones, plant matter, fragments of plaster, glass, cement, bitumen and brick.
No asbestos detected.

Sample No. 4. ASET42851 / 46031 / 4. BHC 0.4 - 0.6.
Approx dimensions 5.5 cm x 4.7 cm x 2.8 cm
Approx total weight of sample = 85.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 5. ASET42851 / 46031 / 5. BHD 0.3 - 0.4.
Approx dimensions 4.5 cm x 3.8 cm x 2.2 cm
Approx total weight of sample = 51.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 6. ASET42851 / 46031 / 6. BHE 0.0 - 0.15.
Approx dimensions 6.0 cm x 5.5 cm x 3.5 cm
Approx total weight of sample = 126.0g
The sample consisted of a mixture of sandy soil, stones and plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 7. ASET42851 / 46031 / 7. BHF 0.5 - 0.6.
Approx dimensions 5.0 cm x 4.5 cm x 3.2 cm
Approx total weight of sample = 83.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 8. ASET42851 / 46031 / 8. BHG 0.0 - 0.2.
Approx dimensions 6.5 cm x 5.5 cm x 3.4 cm
Approx total weight of sample = 148.0g
The sample consisted of a mixture of clayish sandy soil, stones, fragments of plaster, bitumen, glass and brick.
No asbestos detected.

Sample No. 9. ASET42851 / 46031 / 9. BH2 0.1 - 0.2.
Approx dimensions 6.5 cm x 5.7 cm x 4.2 cm
Approx total weight of sample = 173.0g
The sample consisted of a mixture of sandy clayish soil, stones, sandstone, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 10. ASET42851 / 46031 / 10. BH3 0.3 - 0.4.
Approx dimensions 5.5 cm x 5.2 cm x 3.0 cm
Approx total weight of sample = 93.0g
The sample consisted of a mixture of sandy clayish soil, stones, sandstone, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 11. ASET42851 / 46031 / 11. BH4 0.8 - 1.0.
Approx dimensions 6.8 cm x 5.5 cm x 3.6 cm
Approx total weight of sample = 161.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 12. ASET42851 / 46031 / 12. BH5 0.3 - 0.4.
Approx dimensions 5.5 cm x 5.0 cm x 4.2 cm
Approx total weight of sample = 123.0g
The sample consisted of a mixture of sandy clayish soil, stones, sandstone and plant matter.
No asbestos detected.

Sample No. 13. ASET42851 / 46031 / 13. BH6 0.4 - 0.5.
Approx dimensions 6.5 cm x 5.0 cm x 4.2 cm
Approx total weight of sample = 138.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 14. ASET42851 / 46031 / 14. BH7 0.4 - 0.5.
Approx dimensions 5.5 cm x 4.8 cm x 3.9 cm
Approx total weight of sample = 118.0g
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, glass, bitumen, cement and brick like material.
No asbestos detected.

Sample No. 15. ASET42851 / 46031 / 15. BH8 0.5 - 0.6.
Approx dimensions 6.5 cm x 4.7 cm x 3.5 cm
Approx total weight of sample = 128.0g
The sample consisted of a mixture of clayish sandy soil, stones, sandstone, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 16. ASET42851 / 46031 / 16. BH9 1.0 - 1.2.
Approx dimensions 5.5 cm x 5.0 cm x 3.7 cm
Approx total weight of sample = 109.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of glass and brick like material.
No asbestos detected.

Sample No. 17. ASET42851 / 46031 / 17. BH10 0.0 - 0.2.
Approx dimensions 5.5 cm x 4.8 cm x 3.5 cm
Approx total weight of sample = 98.0g
The sample consisted of a mixture of sandy clayish soil, stones, sandstone and plant matter.
No asbestos detected.

Sample No. 18. ASET42851 / 46031 / 18. BH11 0.2 - 0.4.
Approx dimensions 6.5 cm x 5.0 cm x 4.5 cm
Approx total weight of sample = 162.0g
The sample consisted of a mixture of clayish sandy soil, stones, plant matter, fragments of cement, plaster, paint flakes and cement.
No asbestos detected.

Sample No. 19. ASET42851 / 46031 / 19. BH13 0.0 - 0.15.
Approx dimensions 5.7 cm x 5.2 cm x 3.2 cm
Approx total weight of sample = 103.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 20. ASET42851 / 46031 / 20. BH14 0.0- 0.2.
Approx dimensions 7.0 cm x 6.0 cm x 4.5 cm
Approx total weight of sample = 201.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of cement and plaster.
No asbestos detected.

Sample No. 21. ASET42851 / 46031 / 21. BH15 0.6 - 0.7.
Approx dimensions 6.0 cm x 5.2 cm x 2.9 cm
Approx total weight of sample = 104.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,

Chamath Annakkage. BSc
Environmental Technician/Approved Identifier

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

Accredited for compliance with ISO/IEC 17025.

This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia and it also satisfies the requirements of the current NEPM Guidelines. NATA Accreditation does not cover the performance of this service (NATA ISO/IEC17025 AUG 2014).

Disclaimers;

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos, as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

^ denotes loose fibres of relevant asbestos types detected in soil/dust and fragments of ACM smaller than 7mm diameter.
*** denotes asbestos detected in ACM in bonded form.**
 # denotes AF.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

Ω (Sample volume criteria of 500 mL have not been satisfied).

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET42851/ 46031 / 22 - 50
Your ref: J130282
NATA Accreditation No: 14484

10 February 2015

Greencap| NAA
Level 2, 11 Khartoum Road
North Ryde NSW 2113

Accredited for compliance with ISO/IEC 17025.

Attn: Ms Naomi Price

Dear Naomi

Asbestos Identification
This report presents the results of twenty-nine from fifty samples, forwarded by Greencap| NAA on 6 February 2015, for analysis for asbestos.

1.Introduction: Twenty-nine samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1 and Australian Standard AS 4964 - 2004).**

The report also provides approximate weights and percentages, categories of asbestos forms appearing in the sample, such as **AF**(Asbestos Fines), **FA**(Friable Asbestos and **ACM** (Asbestos Containing Material), also satisfying the requirements$^{\Omega}$ of the WA/ NEPM Guidelines)

3. Results :

Sample No. 22. ASET42851 / 46031 / 22. BH16 - 0.6-0.8.
Approx dimensions 4.0 cm x 4.0 cm x 3.0 cm
Approximate total weight of soil = 58.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 23. ASET42851 / 46031 / 23. BH17 - 1.5-1.6.
Approx dimensions 5.5 cm x 5.5 cm x 4.2 cm
Approximate total weight of soil = 125.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 24. ASET42851 / 46031 / 24. BH18 - 0.0-0.2.
Approx dimensions 5.0 cm x 5.0 cm x 4.0 cm
Approximate total weight of soil = 116.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of cement and bitumen.
No asbestos detected.

Sample No. 25. ASET42851 / 46031 / 25. BH19 - 0.05-0.2.
Approx dimensions 5.5 cm x 4.5 cm x 4.0 cm
Approximate total weight of soil = 105.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 26. ASET42851 / 46031 / 26. BH19 - 0.2-0.3.
Approx dimensions 5.0 cm x 5.0 cm x 3.5 cm
Approximate total weight of soil = 116.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 27. ASET42851 / 46031 / 27. BH20 - 0.25-0.4.
Approx dimensions 6.5 cm x 6.5 cm x 3.0 cm
Approximate total weight of soil = 171.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 28. ASET42851 / 46031 / 28. BH21 - 0.0-0.2.
Approx dimensions 4.0 cm x 4.0 cm x 2.5 cm
Approximate total weight of soil = 63.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 29. ASET42851 / 46031 / 29. BH22 - 0.25-0.35.
Approx dimensions 5.5 cm x 5.5 cm x 3.5 cm
Approximate total weight of soil = 155.0g
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement, brick and bitumen.
No asbestos detected.

Sample No. 30. ASET42851 / 46031 / 30. BH23 - 0.5-0.6.
Approx dimensions 5.0 cm x 5.0 cm x 4.0 cm
Approximate total weight of soil = 121.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 31. ASET42851 / 46031 / 31. BH24 - 0.0-0.1.
Approx dimensions 5.0 cm x 5.0 cm x 2.5 cm
Approximate total weight of soil = 74.0g
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 32. ASET42851 / 46031 / 32. BH25 - 0.6-0.8.
Approx dimensions 5.5 cm x 5.5 cm x 3.0 cm
Approximate total weight of soil =100.0g
The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of bitumen.
No asbestos detected.

Sample No. 33. ASET42851/ 46031/ 33. BH26 - 0.2-0.4.
Approx dimensions 6.5 cm x 6.5 cm x 3.5 cm
Approximate total weight of soil = 180.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 34. ASET42851 / 46031 / 34. BH27 - 0.0-0.2.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
Approximate total weight of soil = 245.0g
The sample consisted of a mixture of soil, stones, plant matter, fragments of cement and bitumen.
No asbestos detected.

Sample No. 35. ASET42851 / 46031 / 35. BH28 - 0.2-0.4.
Approx dimensions 5.0 cm x 5.0 cm x 3.5 cm
Approximate total weight of soil = 128.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 36. ASET42851 / 46031 / 36. BH29 - 0.4-0.6.
Approx dimensions 7.5 cm x 7.5 cm x 3.6 cm
Approximate total weight of soil =238.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

Sample No. 37. ASET42851 / 46031 / 37. BH30 - 0.8-0.9.
Approx dimensions 4.0 cm x 4.0 cm x 4.0 cm
Approximate total weight of soil = 75.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 38. ASET42851 / 46031 / 38. BH31 - 0.0-0.2.
Approx dimensions 6.0 cm x 6.0 cm x 3.4 cm
Approximate total weight of soil = 145.0g
The sample consisted of a mixture of soil, stones, plant matter, fragments of cement and bitumen.
No asbestos detected.

Sample No. 39. ASET42851 / 46031 / 39. BH32 - 0.0-0.2.
Approx dimensions 6.5 cm x 6.0 cm x 3.5 cm
Approximate total weight of soil = 146.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of cement and bitumen.
No asbestos detected.

Sample No. 40. ASET42851 / 46031 / 40. BH34 - 0.4-0.5.
Approx dimensions 6.0 cm x 5.0 cm x 3.0 cm
Approximate total weight of soil = 130.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 41. ASET42851 / 46031 / 41. BH35 - 0.0-0.2.
Approx dimensions 5.0 cm x 5.0 cm x 3.0 cm
Approximate total weight of soil = 95.0g
The sample consisted of a mixture of sandy soil, stones and plant matter.
No asbestos detected.

Sample No. 42. ASET42851 / 46031 / 42. BH36 - 0.1-0.2.
Approx dimensions 5.0 cm x 5.0 cm x 2.5 cm
Approximate total weight of soil = 35.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 43. ASET42851 / 46031 / 43. BH37 - 0.3-0.4.
Approx dimensions 6.0 cm x 5.0 cm x 2.5 cm
Approximate total weight of soil = 88.0g
The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 44. ASET42851 / 46031 / 44. BH38 - 0.3-0.4.
Approx dimensions 5.0 cm x 4.0 cm x 4.0 cm
Approximate total weight of soil = 93.0g
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 45. ASET42851 / 46031 / 45. BH39 - 0.0-0.2.
Approx dimensions 7.0 cm x 7.0 cm x 3.6 cm
Approximate total weight of soil = 206.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 46. ASET42851 / 46031 / 46. BH41 - 0.2-0.3.
Approx dimensions 6.0 cm x 6.0 cm x 3.6 cm
Approximate total weight of soil = 121.0g
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 47. ASET42851 / 46031 / 47. GW1 - 0.2-0.3.
Approx dimensions 5.5 cm x 5.0 cm x 4.0 cm
Approximate total weight of soil = 139.0g
The sample consisted of a mixture of clayish soil, stones, plant matte, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 48. ASET42851 / 46031 / 48. GW1 - 0.4-0.45.
Approx dimensions 5.0 cm x 5.0 cm x 5.0 cm
Approximate total weight of soil = 142.0g
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 49. ASET42851 / 46031 / 49. GW2 - 0.1-0.2.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
Approximate total weight of soil = 215.0g
The sample consisted of a mixture of soil, stones, sandstones and plant matter.
No asbestos detected.

Sample No. 50. ASET42851 / 46031 / 50. GW3 - 0.2-0.3.
Approx dimensions 6.0 cm x 5.0 cm x 2.0 cm
Approximate total weight of soil = 55.0g
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier
Approved Signatory

Accredited for compliance with ISO/IEC 17025.

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Disclaimers;

The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos, as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported.

ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.

AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.

FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.

^ denotes loose fibres of relevant asbestos types detected in soil/dust and fragments of ACM smaller than 7mm diameter.
*** denotes asbestos detected in ACM in bonded form.**
 # denotes AF.

All samples indicating "No asbestos detected" are assumed to be less than 0.001 % unless the actual approximate weight is given.

$^{\Omega}$(Sample volume criteria of 500 mL have not been satisfied).

Detailed Site Investigation

Government Property NSW

Proposed Lot 1, 45-61 Waterloo Road, Macquarie Park, NSW

Appendix E: Quality Assurance and Quality Control

1 INTRODUCTION

The aim of quality control and quality assurance (QA/QC) is to deliver data that is:

- representative of what is sampled;
- precise;
- accurate; and
- reproducible.

As investigations involve both field and laboratory QA/QC, these are similarly divided. The objective of this document is to evaluate and identify the data quality objectives (DQOs) and the data quality indicators (DQIs), which are used to assess whether the DQOs have been met.

The NSW guideline documents used in the evaluation of the data set for this investigation are:

- Australian and New Zealand Environment and Conservation Council 1992, Australian and New Zealand *Guidelines for the assessment and management of contaminated sites,* Australia and New Zealand Environment Council, National Health and Medical Research Council, Melbourne, Vic;
- Department of Environment and Conservation NSW 2006, *Contaminated sites: Guidelines for NSW Site Auditors Scheme, 2nd edition*, Department of Environment and Conservation NSW, Sydney, NSW;
- National Environment Protection Council (NEPC) 2013/1999, *National Environment Protection (Assessment of Site Contamination) Measure*, National Environment Protection Council, Adelaide, SA;
- NSW Environment Protection Authority (EPA) 1995, *Contaminated sites: Sampling design guidelines,* EPA NSW, Chatswood, NSW; and
- NSW EPA 2011, *Contaminated sites: Guidelines for consultants reporting on contaminated sites,* EPA NSW, Chatswood, NSW.

Data quality is typically discussed in terms of Precision, Accuracy, Representativeness, Comparability and Completeness. These are referred to as the PARCC parameters. The PARCC (and additional QA) parameters are discussed within this report.

The following items form part of the QA/QC appendix:

- repeatability;
- precision;
- accuracy;
- representativeness;
- completeness;
- comparability;
- sensitivity;
- holding times;
- blanks; and
- procedures for anomalous samples and confirmation checking.

1.1 Background

The terms “quality assurance” and “quality control” are often confused. In any program, quality control is required before assurance can be put in place. Quality Assurance (QA) is “a set of activities intended to establish confidence that quality requirements will be met” (AS/NZS ISO 9000:2005).

This encompasses all actions, procedures, checks and decisions undertaken to ensure the accuracy and reliability of analysis results. It includes routine procedures which ensure proper sample control, data transfer, instrument calibration, the decisions required to select and properly train staff, select equipment and analytical methods, and the day to day judgements resulting from regular scrutiny and maintenance of the laboratory system.

Quality Control (QC) is “a set of activities intended to ensure that quality requirements are actually being met” (AS/NZS ISO 9000:2005). In other words, the operational techniques and activities that are used to fulfil the requirements for quality.

These are the components of QA which serve to monitor and measure the effectiveness of other QA procedures by comparison with previously decided objectives. They include measurement of the quality of reagents, cleanliness of apparatus, accuracy and precision of methods and instrumentation, and reliability of all of these factors as implemented in a given laboratory from day to day.

A complete discussion of either of these terms or the steps for implementing them is beyond the scope of this document. It is widely recognised, however, that adoption of sound laboratory QA and QC procedures is essential and readers are referred to documentation available from the National Association of Testing Authorities (NATA), if further information is required.

2 DATA QUALITY OBJECTIVES

The Data Quality Objectives (DQOs) process is a systematic approach used to define the type, quantity and quality of data supporting decisions which relate to the environmental condition of a site. Undertaking DQOs for site assessment and remediation is a requirement of the DECC (2006), *Contaminated sites: Guidelines for NSW Site Auditors Scheme (2nd edition)*. The DQO process was formulated by the US EPA and provides sound guidance for a consistent approach to understanding site assessment and remediation.

The DQOs are defined in a series of seven steps. Table 1 outlines the seven steps and refers to the sections of the report which address these quality objectives.

Table 1: Data Quality objectives		
Step	**Description**	**Comment**
1	State the problem	The site is a former vehicle station and has been used for commercial/industrial purposes. A preliminary site assessment identified the need for a DSI to be undertaken based on an historical tank farm being present (with 12 underground tanks having been installed). There is the potential for contamination in the soil and groundwater from this as well as from widespread filling and other site activities. The site owners wish to sell the land (land uses once sold may include commercial, public open space and residential). It is necessary to carry out a site soil and groundwater investigation to assess the extent of the contamination and to assess the need for any future remediation.
2	Identify the decision	Once the site has been investigated decisions will be made on whether further remediation is required.
3	Identify the inputs for the decision	Inputs into the decision comprise of a soil and groundwater investigations. Laboratory results will then be compared to generic soil and groundwater guideline values.
4	Define the boundaries for the study	The site is described as Proposed Lot 1 in DP1130630 The temporal boundary of the project is restricted to the timing of the investigations. The specific boundaries are indicated on Figure 1b
5	Develop a decision rule	Under the DQO process, it is important to nominate action levels for decision making. All analytical data for chemicals of concern in soil and groundwater across the site must be below the proposed criteria specified in this report otherwise further evaluation, management control, remedial action or risk assessment may be required.
6	Specify tolerable limits on decision error	Most of the procedures in the NSW EPA (1995) *Sampling design guidelines*, Standards Australia AS 4482.1 (2005) and NEPM (1999, 2013 amendment) have risk probabilities associated with allowable error margins incorporated into them. It is therefore proposed that no further "tolerable limits" be investigated at this stage of the project.
7	Optimise the design for obtaining data	The investigation will target areas of environmental concern based on previous investigations. The sample layout, density and testing regime may not be suitable to adequately define the impacts and may warrant further investigation. Remedial work may be required.

Table 2: Data quality indicators				
Parameter	**Procedure**	**Minimum Frequency**	**Criteria**	
			(5 to 10x LOR[4])	**>10x LOR**
Precision	Field Duplicates	1 in 20 - metals	<80 RPD	<50 RPD
		1 in 20 - semi-volatiles	<100 RPD	<80 RPD
		1 in 20 - volatiles	<150 RPD	<130 RPD
	Lab Replicate*	1 in 20	<50 RPD	<30 RPD
Accuracy*	Reference Material	1 in 10	60% to 140%R	80% to 120%R
	Matrix spikes			
	Surrogate spikes			
Representativeness*	Reagent Blanks	1 per batch	No detection	
	Holding Times*	Every sample	-	
Blanks**	Trip Blank	1 per batch	No detection	
	Rinsate Blanks			
Sensitivity	Limit of Reporting	Every sample	LOR < ½ site criteria	

Notes:

1. RPD – relative percentage difference
2. %R – percent recovery
3. LOR – limit of reporting
4. [4] no limit at <5x LOR
5. * the MDQI is usually specified in the standard method. If not, use the default values set out in this table
6. ** only necessary when measuring dissolved metals and volatile organic compounds in water samples

It should be noted that Standards Australia (AS4482.1) specify that typical MDQIs for precision should be ≤50% RPD, however also acknowledge that low concentrations and organic compounds in particular can be acceptably outside this range. The standard suggests that ≤50% RPD be used as a 'trigger' and values above this level of repeatability need to be noted and explained.

Our adopted MDQI's for precision acknowledge the intrinsic heterogeneity of metal and semivolatile chemical concentrations in disturbed soil that may potentially cause large variations in results between laboratory subsamples (although all efforts are made to homogenise non-volatile duplicate samples). Similarly, large variations in volatile chemical concentrations between duplicates may be unavoidable even when using best practice sampling methodology, especially as we seek to minimise the disturbance to the sample while splitting it which means a high degree of inherent heterogeneity is expected.

As such, our adopted RPD criteria are considered to be a suitable measure for the reproducibility of results within a naturally heterogeneous media such as soil. A ≤50% RPD trigger value will be used, with any exceedances being discussed and assessed for acceptability.

3 SAMPLING AND ANALYSIS PLAN

3.1 Rationale for sampling strategy and density

The field soil sampling program was both a systematic design, based on access and site coverage, and a targeted design. The following bores were drilled at the site:

- soil sampling locations – 15 bores;
- groundwater monitoring wells – one monitoring well.

The sampling locations for the boreholes are shown on Figure 3.

Boreholes for soil sampling were drilled until refusal was met, to a maximum depth of 9 m BGL. Groundwater well GW1 was terminated at 9 m BGL after discussion with the Client. Soil samples were collected on a discrete basis at changes in the lithology or 0.5 to 1.0 metre depth intervals, whichever is the lesser.

Groundwater was encountered at the site between 5 and 8 m BGL.

3.2 Sampling methods

Boreholes were installed and sampled depending on location and accessibility utilising either a push tube or the tip of the drill rig auger. Soil samples for analysis were placed into glass jars which were labelled with the borehole number, depth of discrete sample collection, site reference and date before being placed in a chilled, darkened cooler.

Groundwater samples were collected in amber glass bottles, volatile vials or plastic bottles depending on the individual analytes.

All sampling procedures were undertaken in accordance with industry practice, further details can be provided on request.

3.3 Rationale for laboratory analysis schedule

The analytes selected are based on determination of the Contaminants of Potential Concern (CoPC) for the site, and their potential derivatives (based on the historic use as a fuel depot and market garden). The analytical methods selected are based on those recommended by the laboratories and publications such as Standard methods for the examination of water and waste-water (APHA 2005,

21st edition) and Australian laboratory handbook of soil and water chemical methods (Rayment & Higginson 1992).

4 QUALITY CONTROL AND QUALITY ASSURANCE

4.1 Measurement data quality objectives

Step 7 of the DQO process (Section 2) is a focus on the quality of the information by measurement, that is, measurement data quality objectives (MDQOs). The aim of a quality control and quality assurance (QA/QC) is to deliver data that is representative of what is sampled, precise, accurate and reproducible. As investigations involve both field and laboratory QA/QC, these are similarly divided. The objective of this section is to provide the MDQOs and the measurement data quality indicators (MDQIs), which will be used to establish whether the DQOs have been met.

All surface water, groundwater and soil sampling procedures need to be undertaken according to a standard procedure, for example those procedures set out in:

- National Environment Protection Council (NEPC) 1999, as amended 2013 *National Environment Protection (Assessment of Site Contamination) Measure,* National Environment Protection Council, Adelaide, SA;
- NSW Environment Protection Authority (EPA) 1995, *Contaminated sites: Sampling design guidelines*, EPA NSW, Chatswood, NSW;
- NSW EPA 1997, Contaminated sites: *Guidelines for consultants reporting on contaminated sites,* EPA NSW, Chatswood, NSW.
- Standards Australia, 2005, *Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds,* (AS 4482.1), Standards Australia, Sydney, NSW; and
- Standards Australia, 1999, *Guide to the investigation and sampling of sites with potentially contaminated soil, Part 2: Volatile substances,* (AS 4482.2), Standards Australia, Homebush, NSW.

Measurement data quality is typically discussed in terms of precision, accuracy, representativeness, comparability and completeness. Although not necessarily considered in list order, the following items should form part of the QA/QC data evaluation:

- Measured Parameters: precision, accuracy, repeatability (comparability), blanks; and
- Assessed Parameters: completeness, representative of site conditions, sensitivity, and holding times.

The laboratories used should be NATA accredited for the analytical methods performed. Containers, sample preservation (if necessary) and holding times should be consistent with industry practices as set out in NEPM and as defined by ASTM.

The QA parameters selected and the criteria used to evaluate the analytical data are defined below and presented in Table 2 of this report.

4.1.1 Repeatability (Field collected intra-laboratory duplicates)

These samples provide a check on the analytical performance of the laboratory. At least 5 percent of soil samples (1 in 20) per day of sampling from a site are collected in duplicate. For comparability of data, it is important that there is little delay in the sample submission. For split samples, because of error associated with field splitting, an RPD of between 80 and 150% (depending on the substance) will be allowed as the MDQI. Soil heterogeneity due to the “nugget effect” could result in significantly greater difference, particularly for metals. Consequently, samples with the most observable field homogeneity are selected.

Any value >50% RPD will be noted and discussed, as per Standards Australia requirements, with respect to its acceptability for inclusion in the data-set.

4.1.2 Precision

Precision is a measure of the reproducibility of results, and is assessed on the basis of agreement between a set of replicate results obtained from duplicate analyses. The precision of a duplicate determination can be measured as relative percentage difference (RPD), and is calculated from the following equation:

$$RPD = \left[\frac{X1 - X2}{\left(\frac{X1 + X2}{2} \right)} \right] \times 100$$

Where: X1 is the first duplicate value
X2 is the second duplicate value

The field blind and split duplicate results and calculated RPDs are presented in Table 3. The majority of results are considered to be within the acceptable range, any which are not are discussed in Section 5.1.

4.1.3 Accuracy

Accuracy is a measure of the agreement between an experimental determination and the true value of the parameter being measured. The determination of accuracy can be achieved through the analysis of known reference materials or assessed by the analysis of matrix spikes. Accuracy is measured in terms of percentage recovery as defined by the following equation:

$$\%R = \frac{SSR - SR}{SA} \times 100$$

where: %R = percentage recovery of the spike
SSR = spiked sample result
SR = sample result (native)
SA = spike added

Laboratories calculate percentage recoveries of spiked compounds, which are evaluated against control or acceptance limits taken from the appropriate method or the Contract Laboratory Program Statement of Work. If the spike recovery for a sample does not fall within the prescribed control limits, laboratory based corrective action is required.

Surrogate spikes consist of spiking non-target compounds into the sample prior to analysis. The spiked compounds are expected to behave during analysis in the same way as the target compounds. Every sample is spiked prior to extraction or analysis with surrogate compounds that are representative of the analysis. If surrogate spike recovery does not meet the prescribed control limits, samples should be reanalysed.

For inorganic analyses, certified reference materials are analysed.

4.1.4 Representativeness

Data Point Evaluation

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition.

Representativeness is primarily dependent on the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination,

adherence to sample handling and analysis protocols, and use of proper chain-of-custody and documentation procedures. Blanks, holding times and field duplicates are all QA parameters that can assist in the analysis of representativeness for data point evaluation and will need to be analysed as part of the measurement data quality assessment.

Data Set Evaluation

Whether the data is representative of the site is checked in part by undertaking an evaluation of the whole data set to establish the data is compatible. Data compatibility is authenticated by confirming that the laws of chemistry are upheld (e.g. nitrate is not present when Eh is -250 mV), that intra-laboratory analysis relationships are consistent (e.g. BTEX is a subset of the TPH C6-C9 fraction), that observations and field measurements are in agreement with other field data and the laboratory data and that results are consistent with the geology, history and logic.

4.1.5 Completeness

The following information is required to check for completeness of data sets:

- chain-of-custody forms (completed by NAA and the laboratory);
- sample receipt forms;
- all requested sample results reported;
- all blank data reported;
- all laboratory duplicates reported and relative percent differences (RPDs) calculated;
- all surrogate spike data reported;
- all matrix spike data reported; and
- NATA stamp on reports.

4.1.6 Comparability

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity, sampling procedures) under which separate sets of data are produced to ensure minimal common error. Data comparability should be demonstrated by the use of standardised sampling and analysis procedures. Data comparability was maintained by undertaking the investigations as follows:

- sampling during the investigation was conducted by trained NAA field team using standard operating procedures;
- all soil samples were collected using push tube sampling methods;
- groundwater samples were collected using well specific tubing and bladders; and
- the same laboratory (ALS) was used for organic and inorganic analysis for all relevant samples using the same NATA approved analytical methods.

4.1.7 Sensitivity

When interferences are present in the sample, a loss of sensitivity can occur resulting in an increase in the method detection limit. In some instances (e.g. where one or more compounds have particularly high concentrations) the sample must be diluted for analysis. This increases the method detection limit by the dilution factor.

The detection limits achieved by the laboratory, when adjusted for dry weight and interferences from the presence of other chemicals within the sampled matrix, must be less than half the site criteria for all analytes tested (i.e. 2 x LOR <site criteria).

4.1.8 Holding times

Where standard holding times are exceeded, a discussion, using professional judgement, as to the integrity of the data will be required, taking into account such factors as field storage, laboratory storage and even sample bottle characteristics.

4.1.9 Procedures for anomalous samples and confirmation checking

All results should be checked for discrepancies by the project manager against the anticipated results and all other results within 8 hours of receipt of the results from the laboratory.

Any result that is considered by the supervising scientist to be unusually high or at variance with other results is automatically reanalysed. A significantly different result requires immediate remedial action on the whole sample batch (retesting or using an alternative analytical method) at the laboratory's expense.

After appropriate checking by laboratories, all sample analysis result work-sheets, including those of duplicates and replicate analyses, should be checked by the consultant.

Soil (for the purpose of laboratory analysis) is defined as the portion that passes through a 2 mm sieve when air dry. The retained gravel fraction is assumed to be inert. Analysis is undertaken on the less than 2 mm fraction where possible. This procedure is not possible for organics, and original laboratory sheets are reported on an 'as received' basis unless a correction has been applied.

All results of chemical analysis are analysed on an air dry weight basis and reported on an oven (105°C) dry weight basis, unless specified otherwise. All samples should be adjusted for moisture content when not reported on an oven dry basis.

Once confirmation checking is completed the final laboratory report is issued.

For blind duplicates, if one sample has more than two analytes exceeding the data quality objectives, the sample is carefully checked. If the error is not apparent, the sample is rejected. If more than three samples are rejected all the samples collected at that time are rejected. These samples are then re-sampled and reanalysed.

4.2 Field QA/QC

4.2.1 Details of sampling team

Fieldwork was conducted over a period from 29th January to 3rd February 2015 by Naomi Price.

4.2.2 Sampling controls

Decontamination procedures carried out between sampling events:

- Soil samples were collected from soil profiles removed from a push tube, or in the case of groundwater wells from the tip of the auger. New nitrile gloves were used at each sampling location, no equipment was reused between holes in either the soil or groundwater sampling rounds.
- Dedicated sampling equipment (low flow kit) was used for each groundwater borehole. Bores were sampled in order of least contaminated to most contaminated, this was assumed based on drilling observations and suspected locations of tanks. Groundwater samples were collected directly from the pump tubing and did not pass through the flow cell used to collect readings of water quality.

4.2.3 Sample notation details

The borehole logs details for each sample collected (including time, location, initials of sampler, duplicate locations, duplicate type and field screening details) are presented in Appendix B. The chemical analyses performed on each sample are presented on the chain of custody documentation (Appendix D) which also identify for each sample – the sampler, nature of the sample, collection

date, analyses to be performed, sample preservation method (if any), departure time from the site and dispatch courier.

Site observations are described in Section 3 of the report.

4.2.4 Duplicate sampling

Duplicate samples were collected on each day of sampling. The number of duplicates collected and analysed for each analytical method is provided in Table 3, while duplicate analysis results are presented in Table 4.

Table 3: Analytical Schedule

Analysis	Number Primary samples		Number duplicate samples	
	Soil	Water	Soil	Water
TRH	31	1	2	-
BTEX	31	1	2	-
PAH	31	-	2	-
OCP	31	-	2	-
PCB	31	-	2	-
Heavy metals	31	1	2	-
pH and EC	-	1	-	-
Asbestos	15	-	-	-

Duplicates are prefixed as FD which stands for Field Duplicate and differentiated by number.

Duplicate soil samples were split using two separate methods. In the case of non-volatile samples, the soil sample was mixed and then distributed between two bags. In the case of volatile samples (collected from a clayey soil core), an undisturbed soil core was removed from the push tube, the outer layer of the soil core was then scraped off using a spatula (to prevent cross contamination) then the soil core was cut in half (lengthways) with each half being placed in separate sample jars.

Blanks, spikes and rinsate samples

The scope of this project did not include analysis of background samples, or laboratory prepared trip blanks for the soil sampling program, rinsates were not required during the soil investigation as no equipment was reused. Rinsate samples were not collected during the groundwater investigation due to the fact that new consumables were used at each bore and the pump mechanism was triple rinsed between each bore (Decon90, followed by tap water followed by deionised water). The lack of any detectable organic analytes in the groundwater samples indicates that there was no requirement to collect a rinsate sample.

Greencap did not consider analysis of background samples necessary for the following reasons:

- **Background samples** are used to establish natural soil and groundwater concentrations. Background samples were not possible on this site or in the area as the region surrounding the site has been an industrial area for over 50 years. A true background sample in this region would include organic and inorganic impacts from surrounding industries.

5 LABORATORY QA/QC

Samples for this project were analysed by Analytical Laboratory Services (ALS) who are accredited by NATA for the methods used, details of this accreditation can be viewed at http://www.nata.asn.au/, while details of the samples sent to each laboratory and the analysis requested are contained in the chain of custody documentation held in Appendix D. The analytical methods are noted on the laboratory transcripts. The collection date of samples, laboratory extraction date and allowable holding time are presented on laboratory transcripts. All analysis was completed within the allowable holding times.

The laboratories complete laboratory control samples, laboratory blanks, sample duplicates, surrogate spikes and matrix spikes. These results are presented in the reports included in Appendix D. These reports include details of surrogates and spikes used, percent recoveries of surrogates and spikes used, the instrument detection limits, the method detection limits, the practical quantification limits and the reference samples results. All results were within acceptable limits and there were no exceedances or breaches.

5.1 QA/QC data evaluation

5.1.1 Soil QAQC

RPDs, where calculated, are indicated in Tables 4 and 5. The majority of RPD results were below the adopted suitability criteria of 50%.

Eight RPDs exceeded the adopted criteria of less than 50% RPD adopted for the investigation, however this is a conservative criteria and it should be noted that Standards Australia (AS4482.1) acknowledges that low concentrations and organic compounds in particular can be acceptably outside this range. The standard suggests that ≤50% RPD be used as a 'trigger' and values above this level of repeatability need to be noted and explained. Greencap notes that as the concentrations of chromium, C_6-C_{10} and F1 fractions are between 5 to 10x the LOR the criteria could safely be extended to 80% in which case the samples would pass the criteria.

These exceeding RPDs are likely attributed to both natural heterogeneity of the soil and the "nugget" effect, as well as the difficulty in accurately splitting soil with a high clay content without loss of volatile and semi volatile compounds. As such, the exceeding RPD values are not considered grounds for rejecting the data as a whole.

Field observations and measurements are comparable to laboratory data. The presence (and absence) of odours noted by olfactory senses and/or photoionisation detector (PID) measurements correspond to the detected concentration of volatile chemicals at those locations.

All results adhered to chemical laws or were not outside logical explanation. Metal levels in natural soil were within the expected range.

Extraction and analysis of samples were all within the relevant prescribed holding times. The internal laboratory control results (blanks, duplicates and spikes) are considered to be acceptable.

Based on information presented in this report it can be confidently stated that the MDQO's for this project have been met and the data set is considered to be reliable

5.1.2 Groundwater QAQC

Laboratory measured pH and TDS were compared to field pH and EC and were within acceptable ranges indicating that field collection methods and transport were adequate, pH was generally within 0.5 of a unit between the two analysis methods. As pH is subject to change very quickly this is a good indication of the reliability of the sample methods. The data set for groundwater is considered accurate and reliable based on these results.

Table 4: RPD – Soil results

Analyte		Primary	Duplicate		Primary	Duplicate	
		BHA 1-1.2	FD3	RPD	BHG 0.4-0.6	FD4	RPD
Arsenic	5	<5	<5	-	6	5	18
Chromium	2	8	2	**120**	23	15	42
Lead	5	23	16	36	24	24	0
Phenanthrene	0.5	1	1.4	33	2.4	6.7	**95**
$C_6 – C_{10}$	10	1	1.4	33	4.3	8.1	**61**
$C_6 – C_{10}$ (F1)	10	14	29	**70**	<10	14	-
$>C_{10} – C_{16}$	50	14	29	**70**	<10	14	-
$>C_{16} – C_{34}$	100	570	660	15	1640	3750	**78**
$>C_{34} – C_{40}$	100	550	760	32	2100	3800	**58**
$>C_{10} – C_{16}$ (F2)	50	1120	1420	24	3740	7550	**67**

Notes:

1. All data expressed in mg/kg
2. **Bold text** indicates exceedance of 50% RPD (discussion required)
3. Any samples where no concentration was detected have been omitted from the table

6 QAQC APPENDIX REFERENCES

American Public Health Association (APHA) 2005*, Standard methods for the examination of water and waste-water, 21st edition*, APHA, Washington DC.

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