

Our Ref: 214358_LET_005B.docx

10 March 2016

The General Manager
Gunnedah Shire Council
PO Box 63
GUNNEDAH NSW 2380

Attention: Michael Silver

Dear Mike

DA NO: 2015/062 –ADDITIONAL INFORMATION

Thank you again for facilitating the meeting at Council's offices on Monday 7 March 2016.

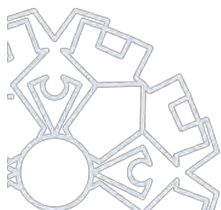
For discussion were two points, being those matters outlined by the Northern Joint Regional Planning Panel as requiring further attention prior to the above development application being determined, namely:

1. *The contamination and proposed remediation of contamination on the whole site, having regard to SEPP 55;*
2. *The details of the proposed community title scheme on Lot 24, including proposed lot layout, details of access to each lot, management during operations and ultimate winding up of the community title scheme, detailing the legal mechanisms proposed to carry out surrender of the community title lots at the end of the life of the development, and drafts of any community title documents.*

In respect of point 1 it was agreed at the above meeting that the remediation measures outlined in Geolyse' Phase 2 Detailed Site Investigation report (dated February 2016) in respect of Zone 1 would be completed in conjunction with the measures outlined for Zones 2 – 4. This would remediate the land such that it could be used for its proposed industrial purpose and therefore meet the obligations of SEPP55. We reconfirm that this is now the intention and the DSI report has been updated to reflect this.

The DSI report demonstrates that the asbestos remaining within the former abattoir buildings currently poses no risk to areas outside of Zone 1 as off-zone migration of asbestos fibres has not occurred; confirmed via soil sampling and analysis. Notwithstanding this, to minimise any residual risk to the surrounding area (such as may occur as a result of site vandalism or the like) it is proposed that the following two specific measures would be implemented in conjunction with the carrying out of the remediation measures outlined in the DSI:

1. The site would be externally secured to prevent unauthorised access; and
2. Hazardous materials remaining within the buildings associated with the former abattoir would be removed by a licenced contractor/hygienist and in accordance with the previously submitted (and



re-supplied) *Asbestos Removal Control Plan* and the *Safe Work Method Statement Asbestos Removal and Metal Roofing Works* (including, for the avoidance of doubt, all relevant Work Health and Safety legislation and WorkCover codes of practice).

Whilst the proposal to remove the asbestos from the buildings exceeds the applicant's obligations in relation to SEPP55 (which relates only to land contamination, and not structures) the removal of the asbestos from the buildings would minimise the potential that any future degradation of this material would pose a risk to surrounding land.

For the avoidance of doubt, the measures outlined above and within the DSI are proposed as amendments to the application in accordance with Clause 55 of the Environmental Planning and Assessment Regulation 2000 and supersede anything to the contrary contained within the original statement of environmental effects and subsequent specialist investigation reports.

In relation to point 2, it was agreed by Council that the revised version of the draft management statement (V2), previously provided on the 1 March 2016, is sufficient to address the JRPP's specific questions, subject to the deletion of the word 'forecast' from sub-section 1 of By-law 2. This change has been made and the updated version (V2.1) of the document is provided with this correspondence. Also provided for clarity is **Drawing TP04** from our lodged drawing set which demonstrates the proposed community title lot arrangement.

We thank Council officers for your assistance to date.

Please contact the undersigned with any questions.

Yours faithfully
Geolyse Pty Ltd



DAVID WALKER
Town Planner

No. of Attachments – 5

1. Updated Phase 2 Detailed Site Investigation report (Version 2)
2. Asbestos Removal Control Plan
3. Safe Work Method Statement asbestos removal
4. Updated draft community title management statement (Version 2.1)
5. Geolyse **Drawing TP04**





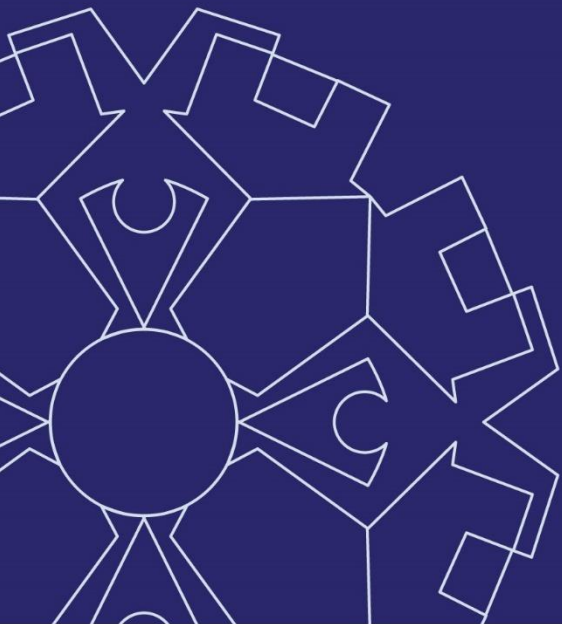
GEOLYSE

**DETAILED SITE INVESTIGATION
FORMER GUNNEDAH ABATTOIR**

QUIA ROAD, GUNNEDAH

**PREPARED FOR
IRONBARK ENERGY PTY LTD**

VERSION 2 - MARCH 2016



• Civil, Environmental & Structural Engineering • Surveying • Environmental • Planning • Architecture

DETAILED SITE INVESTIGATION

FORMER GUNNEDAH ABATTOIR

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Report Title:	<i>Detailed Site Investigation</i>
Project:	<i>Former Gunnedah Abattoir</i>
Client:	<i>Ironbark Energy Pty Ltd</i>
Report Ref.:	<i>214358_REP_006C.docx</i>
Status:	<i>Version 2 – Final</i>
Issued:	<i>10 March 2016</i>

Geolyse Pty Ltd and the authors responsible for the preparation and compilation of this report declare that we do not have, nor expect to have a beneficial interest in the study area of this project and will not benefit from any of the recommendations outlined in this report.

The preparation of this report has been in accordance with the project brief provided by the client and has relied upon the information, data and results provided or collected from the sources and under the conditions outlined in the report.

All information contained within this report is prepared for the exclusive use of Ironbark Energy Pty Ltd to accompany this report for the land described herein and are not to be used for any other purpose or by any other person or entity. No reliance should be placed on the information contained in this report for any purposes apart from those stated therein.

Geolyse Pty Ltd accepts no responsibility for any loss, damage suffered or inconveniences arising from, any person or entity using the plans or information in this study for purposes other than those stated above.

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Executive Summary

Background and Objectives

Geolyse Pty Ltd (Geolyse) was engaged by Ironbark Energy to conduct a Phase 2 Detailed Site Investigation (P2 DSI) at the former abattoir site located on the corner of Quia and Blackjack Roads, Gunnedah NSW. This plan is prepared to support currently pending Development Application (DA) 2015/062, which seeks consent for development of an approximately 27 megawatt solar energy system including a 24 lot Torrens subdivision.

This P2 DSI is prepared by reference to the obligations arising by the NSW State Environmental Planning Policy (SEPP) No 55 – *Remediation of Land* 1998. Clause 7 of SEPP55 obligates that a consent authority must not grant consent to the carrying out of development unless:

- (a) it has considered whether the land is contaminated, and*
- (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

Potential contamination impacts have been identified in previous environmental investigations conducted for the site. The objectives of the P2 DSI were to:

- Establish the extent of soil impacts across the site and establish current site conditions, with respect to potential risks to current and future on-site receptors;
- Delineate previously identified impacts to soil in the vicinity of the former substation, boiler room and skin sheds;
- Assess potential impacts to groundwater proximal to the dump area located in the south-east of the site; and
- Provide sufficient information to develop a remedial approach to render the site as suitable for the proposed site redevelopment.

Field Observations

Soil sampling works were conducted on 1 & 4 February 2016 by East-West EnviroAg Pty Ltd at 82 locations across the site, comprised of 77 surface sampling locations and progression of 5 boreholes to a depth of 15 m below ground level (mbgl). Soil samples were submitted for analysis of chemicals of potential concern (COPC).

Field observations made during the drilling of the soil bores indicated the following:

- Effluent treatment settling ponds were dry. Ponds were historically utilised for treatment of abattoir production wastes, and accordingly have not been operating as such since decommissioning of the abattoir facility in approximately 1996.
- Bonded fragments of fibrous cement material considered to contain asbestos were observed in limited numbers at the soil surface in Zone 1 (former abattoir area). The fragments are considered likely to have resulted from disrepair of site structures which utilised fibrous cement in their construction, and ranged in size from 2 cm to >10 cm in diameter. Subsequent laboratory analysis of 16 soil samples collected from Zone 1 did not identify asbestos fragments, fibres or fines to be present, and asbestos impacts were considered to be limited to this surface building debris.
- No visual signs of gross contamination were identified within the soil sampled in all boreholes drilled, however fill material was prevalent across Zone 1 and the majority of Zone 2 (abattoir external areas) where ash, charcoal, brick and board were observed to be present.

- Stockpiles of mixed demolition waste and soil are present within Zone 2. It is considered that a significant portion of this material was sourced from unauthorised access to the site and illegal dumping.
- The dump area (Zone 4) is considered to have been used for disposal of livestock carcasses (covered) and demolition waste (uncovered) associated with the abattoir operation and decommissioning.
- Groundwater was not encountered in any of the 5 soil bores drilled in Zone 4 to depths of 15 mbgl.

Investigation Findings

Investigations undertaken at the former substation, boiler room and skin shed to respectively delineate previously recorded soil impacts did not identify widespread or gross levels of contamination.

Discharges of shallow groundwater to surface water receptors within Zone 3 (undeveloped areas) have not been identified, and accordingly, potential impacts to shallow groundwater are not considered to present a human health risk in a commercial / industrial setting. Deeper groundwater is not considered to be a receptor of potential impacts associated with the effluent treatment ponds.

Perched groundwater that is potentially impacted by landfilled material may be present within the confines of the filled area, however lateral migration of such impacts was not identified.

Soil samples collected on the northern boundary of the site were submitted for analysis of asbestos, however no asbestos fragments, fibres or fines were detected. Noting that asbestos bundles have previously been recorded in soil samples, it cannot be established whether the previously recorded concentration of asbestos in soil exceeded the adopted investigation level, and the risk to human health from inhalation of asbestos fibres was subsequently considered to be negligible based on the current findings. Based on the absence of friable asbestos in surface soil samples collected from Zone 1 and Zone 2, and the results of previous asbestos air monitoring conducted in 2006 and 2011, release of asbestos fibres from materials within Zone 1, and subsequent migration of such fibres to areas outside of Zone 1, was not considered to be occurring at the time of the P2 DSI.

Overall, analytical results of samples collected across the site are indicative of concentrations of COPC in soil being below the site investigation levels for all samples collected and analysed, with the solitary exception of the soil sample collected at location CH09.

Geolyse considers the findings of the P2 DSI establish that Zone 3 is suitable for commercial / industrial land uses with respect to contamination impacts, whilst management of the following localised contamination impacts will render Zones 1, 2 and 4 as suitable for commercial / industrial land uses:

- Bonded fragments of fibrous cement material likely to contain asbestos (considered to be from disrepair of site structures) were identified to be present in limited locations on the soil surface or atop paved surfaces in Zone 1 only. Geolyse notes that sampling and analysis did not reveal any asbestos impacts (fragments, fibres or fines) in surface soils, and asbestos impacts were considered to therefore be limited to this building debris in Zone 1;
- Hydrocarbon contamination exceeding site investigation levels at location CH09, to the east of the former store in Zone 1. From review of chromatogram readings it is considered that this is likely to be weathered coal (attributed to the nearby boiler) rather than gross contamination;
- Soil proximal to the former boiler room in Zone 1 did not meet the adopted aesthetic criteria for the site;
- Uncharacterised stockpiles comprised of a mixture of soil and demolition waste present in the southern portion of Zone 2; and
- Demolition waste and buried animal carcasses present in Zone 4.

Recommended Remedial Works

Remedial works recommended to be undertaken at the site follow approaches associated with exposure prevention (i.e. on-site containment) and source removal (i.e. off-site disposal).

Remediation of limited instances of surface asbestos impacts is to be conducted in accordance with the NSW WorkCover documents '*How to Safely Remove Asbestos – Code of Practice*' (2011) *Section 7.1 "Removing asbestos contaminated soil"* and '*Managing Asbestos In or On Soil*', (March 2014). Development within Zone 1 would not commence until all asbestos containing building materials are also removed from site structures. An exclusion area surrounding Zone 1, by means of security fencing, will minimise potential for unauthorised access to the site and subsequent damage (i.e. vandalism) of asbestos containing building materials in the interim.

Soil proximal to the former boiler room in Zone 1 not meeting the adopted aesthetic criteria is recommended to be excavated to a depth of 0.5 m for off-site disposal, followed by reinstatement with VENM and/or a paved surface.

Hydrocarbon contamination at location CH09, to the east of the former store in Zone 1 is to be managed in accordance with aesthetic impacts described above, or excavated and disposed off-site. A Site Environmental Management Plan (SEMP) documenting Work Health and Safety (WHS) risk mitigation controls would be required subsequent to development at the site if residual impacts remain.

Aesthetic limitations present in Zone 4 including demolition waste and buried animal carcasses may be managed by reinstatement with virgin excavated natural material (VENM) to a thickness of 0.5 m above the existing grade. Uncharacterised stockpiles present in Zone 2, if assessed to comply with the adopted criteria, may be transported to the dump area within Zone 4 and deposited within the existing void space prior to construction of the containment barrier.

Conclusion

This P2 DSI was prepared with consideration of the SEPP 55 Guidelines (1998) in assessing the potential for the proposed development to increase the risk of exposure to contamination. Geolyse considers the findings of the P2 DSI establish the site is suitable, or can and will be made suitable, for the proposed development, as summarised below.

Overall, the majority of the site including the whole of Zone 3 is considered to be suitable for commercial / industrial land use(s) with respect to contamination impacts. Completion of recommended remedial and validation works to manage localised contamination impacts in Zones 1, 2 and 4 (described in **Section 7.2** of this P2 DSI) will render the remainder of the site as suitable for commercial / industrial land uses.

To avoid any perception of ongoing risk to adjoining areas, the hazardous materials identification, remediation and removal from structures located in Zone 1, although outside the application of SEPP 55, would occur in conjunction with the remediation measures identified within this P2 DSI. This identification, remediation and removal work would be carried out by a licenced hygienist (as required) and in accordance with this P2 DSI (where relevant) and all relevant requirements of the Work Health and Safety legislation and accompanying guidelines and codes of practice.

Introduction

1.1 BACKGROUND

Geolyse Pty Ltd (Geolyse) was engaged by Ironbark Energy to conduct a Phase 2 Detailed Site Investigation (P2 DSI) at the former abattoir site located on the corner of Quia and Blackjack Roads, Gunnedah NSW. This plan is prepared to support currently pending Development Application (DA) 2015/062, which seeks consent for development of an approximately 27 megawatt solar energy system including a 24 lot Torrens subdivision. Proposed Lot 10 in the subdivision would house the former abattoir buildings in the north-west corner of the site. It is understood that it is the applicant's intention to lodge a development application for submission to Council seeking consent to demolish these buildings as a separate and discrete element of the project. The report is prepared to support both the current and future development applications to ensure consistency in investigation and in the context of any necessary remediation.

This P2 DSI is recommended by the 'Managing Land Contamination – Planning Guidelines' (1998) under the NSW State Environmental Planning Policy (SEPP) No 55 – *Remediation of Land* (1998). The proposed development would constitute "*a land use change ... that has the potential to increase the risk of exposure to contamination*", and accordingly the planning authority is required to consider "*is the land suitable, or can and will it be made suitable, for the proposed development*".

The site investigation areas are illustrated on **Drawings 1 and 2**, attached.

1.2 OBJECTIVES

Potential contamination impacts have been identified in previous environmental investigations conducted for the site (refer to **Section 2.5**).

The objectives of the P2 DSI were to:

- Establish the extent of soil impacts across the site and establish current site conditions, with respect to potential risks to current and future on-site receptors within the following areas:
 - Zone 1: Former Abattoir
 - Zone 2: Abattoir External Areas
 - Zone 3: Undeveloped Areas
 - Zone 4: Dump
- Delineate previously identified impacts to soil in the vicinity of the former substation, boiler room and skin sheds;
- Assess potential impacts to groundwater proximal to the dump area located in the south-east of the site (Zone 4); and
- Provide sufficient information to develop a remedial approach to render the site as suitable for the proposed site redevelopment.

1.3 SCOPE OF WORK

The outline of the scope of work conducted to meet the above objectives is shown below:

- Drilling, logging and sampling of 77 shallow soil bores. One sample per bore was submitted for analysis of chemicals of potential concern (COPC) including:
 - heavy metals;
 - organochlorine pesticides (OCPs);

- organophosphorus pesticides (OPPs);
- total recoverable hydrocarbons (TRH);
- benzene, toluene, ethylbenzene, total xylenes and naphthalene (collectively referred to as BTEXN);
- polycyclic aromatic hydrocarbons (PAHs);
- polychlorinated biphenyls (PCBs);
- phenolic compounds; and/or
- asbestos.
- Drilling of 5 soil bores with solid stem and air hammer drilling methodologies to ascertain hydrogeological conditions proximal to the dump area (Zone 4);
- Collation of field and laboratory data; and
- Preparation of this P2 DSI Report.

Background Information

2.1 SITE DESCRIPTION

The Site is located on the corner of Quia and Blackjack Roads, Gunnedah NSW, as shown on the attached Site Locality Map (**Drawing 1**). Details of the general land use, topography, watercourses and identified registered groundwater bores within the vicinity of the site are also presented on **Drawing 1**.

For the purposes of this P2 DSI, the site has been divided into four (4) investigation 'zones', described as follows and presented on **Drawing 2**:

- Zone 1: Former Abattoir – comprises the majority of former operational structures associated with the abattoir facility, decommissioned in 1996.
- Zone 2: Abattoir External Areas – comprises paved and unpaved areas ancillary to the abattoir facility.
- Zone 3: Undeveloped Areas – comprised of land currently utilised for agriculture (livestock grazing) and includes settling ponds (understood to have received effluent from the abattoir facility) and farm dams.
- Zone 4: Dump – an area excavated to a depth of approximately 3 m and anticipated to have been used for disposal of livestock carcasses (covered) and demolition waste (uncovered) associated with the abattoir operation and decommissioning.

2.2 SITE SETTING

The surrounding land uses, potential contaminants and sources, as well as important site features are summarised in **Table 2.1**. The site layout and features are shown on **Drawing 2**.

Table 2.1 – Site Features

Item	Description
Adjacent Properties	North: Quia Road. Werris Creek to Mungindi Railway Line. Farmland, with residences. A light industrial sub-division is located to the north of Quia Road. East: Farmland, with residences. South: Farmland, with residences. A motor racing track is present approximately 400 m to the south of the site. West: Blackjack Road. Farmland, with residences. Loading yards and tailing ponds of Whitehaven Coal is located approximately 1 km to the west-north-west.
General Land Use of the Area	Agricultural activities and industrial / commercial
Potential Sources of Impact	Operations associated with abattoir Weathering of construction materials containing asbestos Abattoir effluent disposal Application of pesticides Former landfilling activities, including livestock carcasses and demolition waste
Chemicals of Potential Concern	Heavy metals Organochlorine pesticides (OCP), Organophosphorus pesticides (OPP) Total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), Polycyclic aromatic hydrocarbons (PAH), Asbestos
Surface Observations and Coverings	Zones 1 and 2 are generally paved, however grassed areas are prevalent. The remainder of the site area is grass covered with established trees present.

Table 2.1 – Site Features

Item	Description
Site Topography	The site is undulating and ranges from approximately 270 m Australian Height Datum (AHD) in the north-west of the site, up to 300 mAHd in the south-eastern portion of the site. The peak of Borethistles Hill, at elevation of 360 mAHd, is located approximately 400 m to the south-east of the site
Watercourses	The Namoi River is approximately 1.1 km to the north-east of the site at its closest. An unnamed and ephemeral tributary of the Namoi River traverses the site from south to north. Settling ponds which have historically received effluent from the abattoir facility are present in the western portion of Zone 3, whilst farms dams which capture overland flow are present in the eastern portion of Zone 3.
Nearby Sensitive Land Uses	Agricultural activities. Recreational activities associated with the Namoi River.

2.3 REGIONAL AND LOCAL GEOLOGY

The site is located within two soil landscapes as shown on **Figure 1**.

The 'Kh1' soil landscape consists of plains along major and minor functional streams: chief soils are dark cracking clays (Ug5.16) and hard alkaline dark soils (Dd1.33 and Dd1.43) often occurring together as soil complexes, and showing weak (few inches) gilgai features. The Ob16 soil landscape consists of undulating to low hilly terrain broken by steeply sloping cuesta-like ridges: chief soils of the undulating to low hilly areas are hard alkaline red soils (Dr2.23) and sometimes (Dr2.33). Associated are steep ridges with bare rock walls on their east-facing slopes, and various soils, including (Uc2.2), (Dy5.42), and (Gn2.15), usually covered with waterworn gravels on their gentler slopes.



Figure 1: Site Soil Landscape Groups

A Geotechnical Land Capability Assessment was previously prepared to support the development application for the approved 90 lot industrial subdivision at the site. A summary of this assessment is provided as follows:

- *Surface soils vary between silt, sandy silt and sandy clay. All are dry and exhibit low plasticity;*
- *Rock exposures were observed in the vegetated area in the north-east of the site;*
- *No signs of dry land salinity, such as salt crystals or scalding, were observed. No obvious salt tolerant species were observed. Laboratory test results indicate that the soils naturally contain elevated concentrations of salt.*
- *The soils are non-sodic to marginally sodic.*
- *No signs of erosion or instability of natural slopes were observed.*
- *Groundwater was not encountered in test pits, with one registered bore located to the south of the site.*

The geotechnical report concluded there were no significant geotechnical or soil constraints present on the site that would prevent development of the site for industrial purposes.

The Manilla Geological 1 : 250,000 Series Sheet SH/56-09 (Geological Survey of NSW, 1973) indicates the underlying site geology is expected to be comprised of two formations:

- Site West: Upper Permian age 'Gladstone Formation' consisting of sandy shale, shaley sandstone and coal.
- Site East: Quaternary age stream alluvial deposits, including riverine plain deposits, sandy to silty, minor gravels.

The geology of the site, based on drilling data from installation of a groundwater bore located approximately 140 m west of the site (see **Section 2.4**), constructed in 1951 (NSW Office of Water Licence Reference GW009808), is described as approximately 43 m of clay, overlying 15 m of clay gravel with sandstone bedrock below.

Rocky outcrops are present across the site, generally located on the hill crests located in the south-east of the site.

The Australian Soil Resource Information System (ASRIS) on-line database, maintained by CSIRO Land and Water, indicates there is an extremely low probability of occurrence of acid sulphate soils in the area of the site (compiled 2008, accessed February 2016).

2.4 GROUNDWATER BORES RECORD SEARCH

A search for registered groundwater users located within a 1 km radius of the site was undertaken using the NSW Office of Water on-line database (<http://realtime.data.water.nsw.gov.au/water.stm>), in January 2016. The results indicated that there is one registered groundwater bore within 500 m of the site, registered for stock purposes.

Table 2.2 – Groundwater Bores within 1 km of Site

Licence Reference	Location	Year Installed	Depth	Water Bearing Zone(s)	Registered Use(s)
GW009808	140 m west	1951	99.40 m	@ 18.3 m @ 94.5 m	Stock

Source: NSW Office of Water on-line database (<http://realtime.data.water.nsw.gov.au/water.stm>)

Geolyse has considered the surrounding agricultural land uses and notes the potential for unregistered bores for irrigation purposes proximal to the site.

2.5 PREVIOUS SITE INVESTIGATIONS

Prior to the current investigation, three investigations pertaining to contamination status have been undertaken on the site. A summary of the scope of works and findings are presented below:

New Environment, May 2006 – Preliminary Assessment of Potential Off-Site Asbestos Migration, Former Gunnedah Abattoir Site, 131 Quia Road, Gunnedah, NSW, 2380 (unsighted by Geolyse)

Table 2.3 – Summary of New Environment, 2006: Preliminary Assessment of Potential Off-Site Asbestos Migration

Item	Comment
Objectives	Not specified.
Scope of Works	• Soil sampling from 127 near surface sampling locations (<0.2m) located on an approximate grid across the entire Site as well as a number of offsite locations, noting that a higher density of sampling was undertaken in the vicinity of the former abattoir buildings • A total of 41 Soil samples were submitted for asbestos analysis. • Air monitoring was undertaken for 8hrs over two days at 12 locations across the Site.
Findings	• Chrysotile and amosite asbestos bundles between 1mm and 2mm in length were identified at sampling locations 17 (east of north eastern corner of buildings, adjacent to Quia Road), 41 (north eastern corner of Site, adjacent to Quia Road), 50 (north eastern portion of Site) and 127 (offsite location to north west of abattoir buildings area). • Fibre cement fragments collected from seven areas in the former abattoir buildings area were identified to contain asbestos. • Asbestos was not detected above the laboratory detection limit (<0.01 fibres/mL) at each [air monitoring] location. • Based on the air monitoring and dispersion modelling, New Environment concluded that the asbestos fibres detected in soils was most likely attributable to train brake dust or other vehicle use rather than migration from the former abattoir buildings area.

Source: Environ, 2007

Environ, July 2007 – Preliminary Contamination Assessment, Gunnedah Abattoir, Corner of Quia Road and Black Jack Road, NSW

Table 2.4 – Summary of Environ, 2007: Preliminary Contamination Assessment

Item	Comment
Objectives	• Gain an understanding of the Site history with respect to potential contamination risks. • Identify the areas and contaminants of concern for the Site. • Assess the potential for non-asbestos related widespread gross contamination to be present at the Site. • Identify the need for further investigations as well as remediation/ management works.
Scope of Works	• A Site history review. • A Site inspection. • Limited field investigations and laboratory analysis of soil samples. • Data interpretation and report preparation.
Findings	• The potential for widespread gross non-asbestos related contamination to be present at the Site is low; • The contaminant levels identified do not significantly impact on the rezoning and redevelopment; • Based on laboratory results and observations made during the investigation, it was considered that further works may be required in the following areas: - Dump – Investigation of the nature and extent of buried waste materials in the south eastern corner of the Site (potential requirement for remediation works to remove aesthetically and possibly chemically unsuitable materials); - Boiler Room – Investigation of hydrocarbon impacts and removal of aesthetically unsuitable soils (unlikely to require large scale remediation works); - Delineation of OCP concentrations in near surface soils where detected concentrations were identified (unlikely to require remediation works based on available data); - Settling Ponds, Save All Plant and former waste distribution infrastructure – Investigation of bacterial impacts in near surface soils and groundwater (potential for some remediation works to cap unsuitable materials).

Source: Environ, 2007

SLR, June 2011 – Airborne Asbestos Monitoring and Site Inspection, Building Area, The Former Gunnedah Abattoir Site, 131 Quia Road, Gunnedah, NSW 2380

Table 2.5 – Summary of SLR, 2011: Airborne Asbestos Monitoring and Site Inspection

Item	Comment
Objectives	- Develop an understanding of the current status of airborne asbestos potentially migrating from the Building Area with the intention of addressing the first two actions, viz.: - An analysis of, including measurement to quantify the nature and extent of pollution on the site by asbestos waste; and - An identification of all exposure pathways to human beings or adjoining land of the asbestos wastes.
Scope of Works	- Site inspection within the Building Area of the site; and - Eight hour airborne asbestos monitoring for 2 days at 12 locations within the Building Area.
Findings	- the likelihood of the migration of airborne asbestos to the environment external to the Building Area is low and does not appear to indicate an unacceptable level of public health risks which requires control measures immediately. - the sporadic presence of fibre cement sheeting fragments suspected of containing asbestos in the area suggests that an asbestos management plan/technical scope of works report be prepared as part of the proposed subdivision provided that a need for asbestos removal is warranted pursuant to the Protection of Environment Operations Act 1997. - is recommended that appropriate site access measures be in place in order to control unauthorised and/or inadvertent access to the site.

Source: SLR, 2011

Adopted Site Investigation Levels

3.1 HUMAN HEALTH

The National Environment Protection Council (NEPC) *National Environment Protection (Assessment of Site Contamination) Measure, 1999* (amended 2013) provides a framework for the use of investigation and screening levels. The framework (i.e. the 'Amended ASC NEPM') is applicable for assessing human health risk via all relevant pathways of exposure and covers a broad range of metals and organic substances. Different levels are provided for a variety of exposure settings including:

- Residential (high density) 'B'
- Recreational 'C'
- Commercial / Industrial 'D'.

Health Investigation Levels

The NEPM Health Investigation Levels (HILs) have been developed to be protective of human health. Based on the current and future land uses for the site proposed as a solar farm, concentrations of contaminants in the soil are to be compared against the commercial / industrial 'HIL D' land use HILs.

Health Screening Levels

The Amended ASC NEPM (NEPC, 2013) presents health screening levels (HSLs) for petroleum compounds. HSLs are relevant to various land use settings for residential, recreational open space, and commercial / industrial land use and reflect the risk posed by vapour.

Based on the current and future land uses for the site, concentrations of contaminants in soil are to be compared against the commercial / industrial 'HSL D' land use HSLs. Where screening levels are non-limiting, Geolyse has adopted the maximum – or saturation¹ – concentration as the soil investigation level.

Asbestos in Soil

The amended ASC NEPM (NEPC, 2013) provides HSLs for bonded, friable and all forms of asbestos in soil. The HSLs were adopted from the WA Guidelines for the Assessment, Remediation and Management of Asbestos – Contaminated Sites in Western Australia (WA Department of Health, 2009).

Asbestos in soil HSLs for the site include commercial / industrial 'HSL D'.

The NEPM HSL for friable asbestos (fibrous asbestos (FA) and asbestos fines (AF)) can be lower than the LOR of the analytical method under some circumstances. The analytical LOR for friable asbestos (FA and AF) should be adopted as an assessment criterion for asbestos in soil provided a weight of evidence approach is taken and the following items are considered:

- The presence of free fibres (e.g. respirable) by qualitative trace analysis is assessed
- Surface soils (at the immediate sample location and across the site generally) are free of visible forms of asbestos (e.g. fragments of fibrous cement)
- The concentration of bonded asbestos containing material (ACM) is less than the HSL.

¹ Soil saturation concentration at which the porewater phase cannot dissolve any more of an individual chemical, adopted from NEPM 1999 (2013) Health screening levels for petroleum hydrocarbons in soil and groundwater

3.2 MANAGEMENT LIMITS

The Amended ASC NEPM (NEPC, 2013) Management Limits for TRH reflect the nature and properties of petroleum hydrocarbons. Management Limits are specified for coarse and fine soil types and land uses. Compliance with the Management Limits avoid or minimise the potential effects of the following and require consideration of site-specific factors to determine the maximum depth to which the limits should apply:

- Formation of observable LNAPL;
- Fire and explosive hazards;
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services by hydrocarbons; and
- Aesthetics.

3.3 BIOSOLIDS

Soil samples collected from effluent treatment ponds in Zone 3 have been compared to the 'Contaminant Acceptance Concentration Thresholds' of the NSW EPA *Environmental Guidelines: Use and Disposal of Biosolids Products* (2000) which "describe the quality of a biosolids product based on the concentration of its constituent contaminants".

For the purposes of this investigation, the criteria of 'Contaminant Grade C' have been adopted, which, in conjunction with the material being considered to be 'Stabilisation Grade B' (on account of being subject to aerobic drying for a number of years), would allow land uses including agriculture, forestry, soil and site rehabilitation² and landfill disposal.

3.4 AESTHETICS

In accordance with the Amended ASC NEPM (NEPC, 2013), the aesthetic state of sites is required to be taken into account. Aesthetic issues generally relate to the presence of materials with a negligible risk or non-hazardous inert foreign material in soil or fill resulting from human activity. Sites that have been assessed as being acceptable from a human health and environmental perspective may still contain such foreign material. An assessment of the site aesthetics requires consideration of the natural state of soil on any given site, and a comparison between it and the soil encountered during investigation works.

In particular, soils on site should not exhibit discolouration (staining), a malodorous nature (including when dug over or wet) or abnormal consistency (rubble and asbestos). Where any of these were observed, this was noted on the field logging sheets (**Appendix A**), to enable the extent of objectionable materials to be determined.

3.5 WASTE

Where applicable, consideration of preliminary waste classification data, relevant to potential remediation activities requiring offsite disposal of material, would be in accordance with under the NSW EPA 'Waste Classification Guidelines – Part 1: Classifying Waste', November 2014.

² "may be used for one-off rehabilitation of industrial and urban sites. Such land may include: urban land not used for growing food crops or grazing food animals; public ovals, playing fields, bowling greens, racetracks, council parks and gardens; military establishments; aerodromes; nature strips; median strips; completed rubbish dumps; and other land zoned by councils to prevent use for agricultural purposes", (NSW EPA, 2000)

Methodology

The methodology adopted in this P2 DSI was in general accordance with that described in the 'Sampling Plan – Former Gunnedah Abattoir' (Geolyse, 2016).

4.1 SURFACE SOIL INVESTIGATION

Table 4.1 outlines the scope and method of the soil investigation. The locations of the soil bores are presented on **Drawings 3** and **4**.

Table 4.1 – Summary of Soil Investigation Program

Item	Description
Date of Field Activities	1 & 4 February 2016
Intrusive works	All soil sampling works were completed by East-West EnviroAg Pty Ltd, using a combination of hand-auger and truck-mounted hydraulic soil sampler.
Number of Soil Investigation Points	Zone 1: 24 soil bores were completed to depths ranging from 0.2 to 0.4 mbgl. Zone 2: 17 soil bores were completed to depths ranging from 0.2 to 0.4 mbgl. Zone 3: 36 soil bores were completed to depths ranging from 0.2 to 0.4 mbgl. Zone 4: Five bores were completed to depths of 15 mbgl. See Section 4.2 'Hydrogeological Investigation' below.
Soil Logging	Soil classifications and descriptions were based on United Soil Classification System (USCS) and Australian Standard (AS) 4482.1-1997. Soil profile reports are provided in Appendix A .
Soil Sampling	Soil samples were collected from soil bores by hand or using a hand auger, and were placed in sample bags using dedicated nitrile gloves. All samples were placed in clean, laboratory-supplied zip-lock bags with minimal headspace.
Decontamination Procedures	All re-usable equipment was cleaned between each sample location by removing any encrusted materials and washing with decontamination solution and rinsing with potable water as required.
Sample Preservation	Samples were stored on ice in chill-boxes whilst onsite and in transit to the laboratory.
Borehole Reinstatement	All boreholes that were abandoned were backfilled with the original soil cuttings removed from each respective borehole.

4.2 HYDROGEOLOGICAL INVESTIGATION

A total of 5 bores were drilled in Zone 4 on 1 February 2016 to assess hydrogeological conditions proximal to the dump area. Each bore was drilled to a depth of 15 mbgl using rotary auger and/or down-hole air hammer. Bores were reinstated to ground level upon completion.

Bores were not converted to groundwater monitoring wells as infiltration of water was not apparent at any depth to 15 mbgl.

4.3 SOIL ANALYTICAL SCHEDULE

A total of 77 primary soil samples were analysed by ALS Environmental (the primary laboratory) and 7 field quality control (QC) duplicate samples were analysed by Envirolab (the secondary laboratory). Soil samples were submitted for analysis as described in **Table 4.2** below.

Table 4.2 – Soil Schedule of Analysis

Investigation Zone	Samples	Analysis
Zone 1	CH01, CH02, CH03, CH05, CH07, CH08, CH09, CH10, CH11, CH13, CH15, CH16, CH16B	Metals Asbestos OCPs / OPPs / PCBs Phenolic Compounds / PAHs TPH / TRH / BTEXN
	CH65	Asbestos OCPs / OPPs
	CH66, CH67, CH68, CH69, CH70, CH71, CH72	OCPs / OPPs
	CH74	Metals Asbestos PAHs TPH / TRH / BTEXN
	CH75	Metals PAHs TPH / TRH / BTEXN
Zone 2	CH17, CH18, CH19, CH20, CH21, CH23, CH24, CH25, CH26	Metals Asbestos OCPs / OPPs / PCBs Phenolic Compounds / PAHs TPH / TRH / BTEXN
	CH76	Asbestos OCPs / OPPs
	CH77, CH78, CH79, CH80, CH81, CH82, CH83	OCPs / OPPs
Zone 3	CH04, CH28, CH29, CH30, CH31, CH32, CH33	Metals Asbestos OCPs / OPPs
	CH34, CH35, CH36, CH37, CH38, CH39, CH40, CH41, CH42, CH43, CH44, CH45, CH46, CH47, CH48, CH49, CH50, CH51, CH52, CH53, CH54, CH55, CH56, CH57, CH58, CH59, CH60, CH61, CH64, CH64B	Metals OCPs / OPPs
Zone 4	No Samples Collected	No Analysis Performed

Results

5.1 FIELD OBSERVATIONS

Field observations made during the drilling of the soil bores indicated the following:

- Effluent treatment settling ponds were dry. Ponds were historically utilised for treatment of abattoir production wastes, and accordingly have not been operating as such since decommissioning of the abattoir facility in approximately 1996.
- Bonded fragments of fibrous cement sheeting material considered to contain asbestos, based on previous Hazardous Materials Survey findings (New Environment, 2006, summarised in Environ, 2007) and conclusions of the Airborne Asbestos Monitoring and Site Inspection report (SLR, 2011), were observed in limited numbers at the soil surface in Zone 1 (former abattoir area). The fragments are considered to have resulted from disrepair of site structures which utilised fibrous cement in their construction, and ranged in size from 2 cm to >10 cm in diameter. Subsequent laboratory analysis of 16 soil samples collected from Zone 1 did not identify asbestos fragments, fibres or fines to be present, and asbestos impacts were considered to be limited to this surface building debris.
- No visual signs of gross contamination were identified within the soil sampled in all boreholes drilled, however fill material was prevalent across Zone 1 and the majority of Zone 2 where ash, charcoal, brick and board were observed to be present.
- Stockpiles of mixed demolition waste and soil are present within Zone 2. It is considered that a significant portion of this material was sourced from unauthorised access to the site and illegal dumping.
- The dump area within Zone 4 is considered to have been used for disposal of livestock carcasses (covered) and demolition waste (uncovered) associated with the abattoir operation and decommissioning. No evidence of fibrous cement sheeting was apparent in the observed demolition waste in Zone 4.

5.2 SITE LITHOLOGY

The general site geology encountered during the progression of soil bores is presented in **Tables 5.1** and **5.2** below. Soil profile reports are presented in **Appendix A**.

Table 5.1 – General Lithology – Zone 1 & Zone 2 (Abattoir Operational Areas)

Depth	Description
0 to 0.1 mbgl	FILL: clay / sand / silt / gravel, dry, grey-brown-red
> 0.1 mbgl	CLAY: dry-moist, brown-red-orange, medium plasticity

Table 5.2 – General Lithology –Zone 3 & Zone 4 (Undeveloped / Farming Areas)

Depth (mbgl)	Description
0 to 0.1 mbgl	Gravelly SAND: some silt, dry, grey-brown, angular gravel, fine-grained sand
> 0.1 mbgl	CLAY: dry, brown-red-orange, medium plasticity

The underlying geology encountered in Zone 4 during drilling of bores to 15 mbgl predominantly consisted of shaley sandstone.

5.3 SITE HYDROGEOLOGY

Groundwater was not encountered in any of the 5 soil bores drilled in Zone 4 to depths of 15 mbgl. This is consistent with the hydrogeology encountered during construction of groundwater bore reference GW009808 (located 140 m west of the site – refer to **Section 2.4**), which encountered a water bearing zone at 18.3 mbgl, noting that the general slope of the land falls from east to west, and groundwater depths relative to ground level are considered to be deeper in the upgradient (i.e. eastern) extent of the site.

Observed hydrogeology was also consistent with the findings from Environ, 2007, per the following extract:

At present, groundwater is unlikely to occur at depths <3 m below ground surface, and in conjunction with the low permeability clays if significant contamination were present the potential for vertical migration of contamination is low.

5.4 SOIL ANALYTICAL RESULTS

Soil analytical data are presented in the attached tables (**Tables 1 to 3**) and in the laboratory reports contained in **Appendix B**.

All samples meet the respective soil investigation levels, with the exception of sample CH09, collected from a depth of 0.2 mbgl, and recorded the following exceedances of adopted industrial / commercial investigation levels:

- Naphthalene was recorded at a concentration of 30 mg/kg, which exceeded the adopted HSL, equivalent to the soil saturation concentration (9 mg/kg);
- The benzo(a)pyrene toxicity equivalence quotient (TEQ) was recorded to be 440 mg/kg, above the HIL of 40 mg/kg;
- The concentration of total PAHs was recorded to be 4,690 mg/kg, above the HIL of 4,000 mg/kg;
- The TRH concentration in the >C₁₆-C₃₄ fraction was recorded to be 10,300 mg/kg, above the management limit of 3,500 mg/kg

Maximum concentrations of COPCs including lead, zinc and the OCP dieldrin were recorded at location CH09, however these concentrations were all below the adopted investigation levels.

5.5 QUALITY OF ANALYTICAL DATA

Analytical data validation is the process of assessing whether the data is compliant with method requirements and project specifications. The objective of this process is to ensure that data of known quality are reported and to identify if it can be used to fulfil the overall project objectives.

The data validation guidelines adopted are based upon the following guidance documents, which include published United States Environmental Protection Agency (USEPA) guidelines:

- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 540-R-10-011, dated January 2010);
- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 540/R-99/008, dated June 2008); and
- NEPC (2013), *National Environment Protection (Assessment of Site Contamination) Measure, 1999, Guideline on Investigation Levels for Soil and Groundwater*.

The process involves the checking of analytical procedure compliance and the assessment of the accuracy and precision of analytical data from a range of quality control measurements, generated from both field sampling and analytical programs.

Specific elements that have been checked and assessed for this project include:

- Preservation and storage of samples upon collection and during transport to the laboratory;
- Holding times;
- Use of appropriate analytical procedures;
- Required limit of reporting (LOR);
- Frequency of conducting quality control measurements;
- Laboratory blanks;
- Field duplicates (intra-laboratory duplicates);
- Laboratory duplicates;
- Matrix spike / matrix spike duplicates (MS/MSDs);
- Surrogates (or System Monitoring Compounds); and
- The occurrence of apparently unusual or anomalous results, e.g. laboratory results that appear to be inconsistent with field observations or measurements.

Analytical results of QA/QC samples are included in **Table 4** (attached). Laboratory data QA/QC reports are included in **Appendix C**.

On the basis of the analytical data validation procedure employed, the overall quality of the analytical data produced is considered to be of an acceptable standard for interpretive use.

Discussion

The soil samples collected from the site recorded concentrations of COPCs below the respective soil investigation levels indicative of negligible impacts to soil, with the exception of location CH09. Bonded fragments of fibrous cement material considered to contain asbestos (per findings described in New Environment 2006 and SLR 2011) were observed in limited numbers at the soil surface in Zone 1, however no asbestos impacts (fragments, fibres or fines) were identified in surface soils. Asbestos impacts requiring management were considered to be limited to building debris present at the soil surface or atop paved surfaces. No analysis of landfilled materials within Zone 4 was conducted, however impacts common to burial of organic wastes (e.g. odour, microbes, nutrients) were assumed to be present.

6.1 ZONE 1 – FORMER ABATTOIR

In general, the assessment of soil within Zone 1 reported concentrations of COPC below the site investigation levels, with the only exception being hydrocarbon contamination at location CH09, located to the east of the former store structure. These impacts are characterised by dark staining are considered to be associated with coal and/or ash from the former boiler room approximately 50 m to the south. Review of the analytical chromatogram for the CH09 sample was compared with a reference chromatogram for 'weathered coal', as shown below on **Figure 2**, and the hydrocarbon source recorded at CH09 was considered to be related.

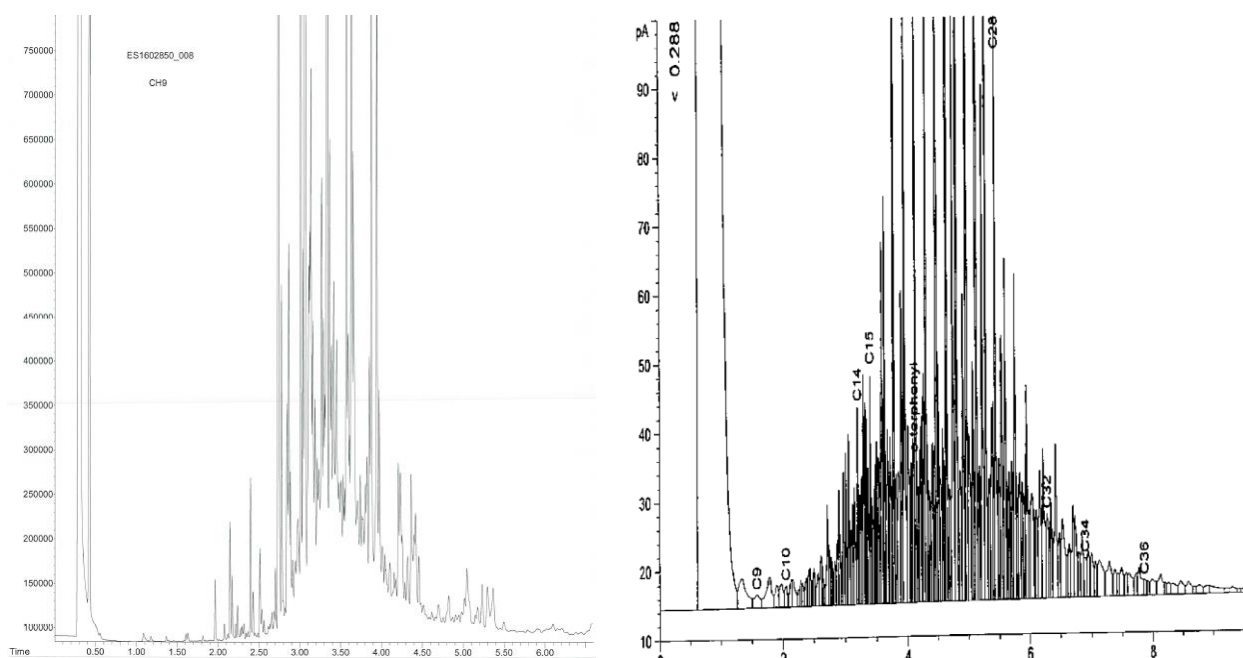


Figure 2: Sample CH09 Chromatogram (left) and 'Weathered Coal' Reference Chromatogram (right)

Exceedances of investigation levels recorded at CH09 relate to risks to human health in a commercial / industrial setting predominantly through ingestion and dermal absorption exposure pathways. No risks to human health in a commercial / industrial setting via the vapour volatilisation and inhalation pathway have been identified.

Other risks to underground infrastructure may be present based on exceedance of petroleum hydrocarbon management limits and naphthalene being present at a concentration exceeding the soil saturation concentration.

The investigations undertaken at the former substation and boiler room to respectively delineate previously recorded hydrocarbon (TPH/TRH) and OCP soil impacts (Environ, 2007), did not identify

widespread or gross levels of contamination. Concentrations of TPH/TRH and OCP in soil above the laboratory LOR are sufficiently below the site investigation levels and are not considered to be associated with a point source of contamination or present a risk to human health.

No surface soil samples were recorded to contain asbestos (bonded, fibrous or fines), however the presence of limited bonded fragments of fibrous cement material at the soil surface in Zone 1, suspected to contain asbestos, presents a risk to future users of the site should the bonded fragments become friable (due to weathering of surface fragments) causing fibres to become airborne. At the time of the P2 DSI, these fragments were not considered to be friable or sufficiently weathered to have resulted in fibres having become airborne. This conclusion is reinforced by reference to surface soil sampling results which show no asbestos (bonded, fibrous or fines) to be present.

Based on the absence of friable asbestos in surface soil samples collected from Zone 1 (and Zone 2), and the results of previous asbestos air monitoring conducted in 2006 and 2011, release of asbestos fibres from materials within Zone 1, and subsequent migration of such fibres to areas outside of Zone 1, was not considered to be occurring at the time of the P2 DSI.

6.2 ZONE 2 – ABATTOIR EXTERNAL AREAS

Analytical results of samples collected from Zone 2 indicate concentrations of COPC in soil were below the site investigation levels for all samples collected and analysed.

The investigation undertaken at the former skin shed to delineate previously recorded OCP soil impacts (Environ, 2007), did not identify widespread or gross levels of contamination. Analysis of sampling completed for this report revealed that concentrations of OCP in soil above the laboratory LOR are sufficiently below the site investigation levels and are not considered to be associated with a point source of contamination or present a risk to human health.

Stockpiles of non-determined origin are present in the southern portion of Zone 2 and have not been characterised as part of this P2 DSI, however have been observed to be comprised of a mixture of soil and demolition waste.

6.3 ZONE 3 – UNDEVELOPED AREAS

The effluent treatment ponds within Zone 3 were observed to be dry, having not been operating for treatment of abattoir production wastes since decommissioning of the abattoir facility in approximately 1996. Soil samples collected from these ponds did not identify COPC at concentrations exceeding the site investigation levels, including the more sensitive '*Contaminant Acceptance Concentration Thresholds*' (NSW EPA, 2000).

The previously identified concentration of total coliforms in surface sediment of the primary anaerobic treatment pond (when dry) was >24,000 MPN³/g, (Environ, 2007) and was compared to the '*Stabilisation Grade A Microbiological Standards*' for faecal coliforms (1,000 MPN/g), described in NSW EPA, 2000. Geolyse notes that faecal coliforms are a sub-set of total coliforms and, as reported by the National Health and Medical Research Council and Natural Resource Management Ministerial Council (NHMRC & NRMCC, 2014) *National Water Quality Management Strategy – Australian Drinking Water Guidelines*, "*Total coliforms (excluding E. coli) are not considered useful as indicators of the presence of faecal contamination and enteric pathogens, as there are many environmental coliforms that are not of faecal origin*".

For the purposes of this investigation, surface material present in the disused effluent treatment ponds is considered to be, as a minimum, compliant with criteria of 'Stabilisation Grade B' (on account of having been subject to aerobic drying for a number of years). Geolyse also notes that the shallow depth (0.05 to 0.10 mbgl) and the low moisture content (4.8%) of this sample, would result in exposure to aerobic conditions not conducive to growth of faecal coliforms.

³ MPN – most probable number

Historic soil samples collected from depths corresponding to localised shallow groundwater (i.e. 2.6 – 2.7 mbgl) at the primary anaerobic effluent treatment pond recorded acceptable levels of total coliforms (630 MPN/g), when compared to the ‘Stabilisation Grade A Microbiological Standards’ (NSW EPA, 2000).

Discharges of shallow groundwater to surface water receptors within Zone 3 have not been identified, and accordingly, potential impacts to shallow groundwater are not considered to present a human health risk in a commercial / industrial setting. Deeper groundwater is not considered to be a receptor of potential impacts associated with the effluent treatment ponds due to the depth to groundwater (>15 m) and *“the vertical migration of contamination is likely to be limited due to the nature of the high plasticity and presumably low permeability clays encountered at the site”* (Environ, 2007).

6.4 ZONE 4 – DUMP

The results of drilling in Zone 4 are indicative of the absence of a shallow aquifer. Perched groundwater that is potentially impacted by landfilled material (i.e. leachate) may be present within the confines of the filled area, however lateral migration of such impacts was not identified. Further, the rainfall deficit in the region (mean daily rainfall of 1.75 mm, as compared to mean daily evaporation of 60 mm)⁴, in conjunction with evapotranspiration by nearby deep-rooted vegetation is considered likely to limit migration of impacts.

Similar to Zone 3, deeper groundwater within Zone 4 is not considered to be a receptor of potential impacts associated with the dump area due to the depth to groundwater (>15 m) and *“the vertical migration of contamination is likely to be limited due to the nature of the high plasticity and presumably low permeability clays encountered at the site”* (Environ, 2007).

Uncovered demolition waste material present in Zone 4 presents an aesthetic limitation to the site. Whilst the thickness of the covering layer of soil atop animal burial trenches was not determined, a potential pathogen exposure pathway is considered unlikely to be present based on decomposition of animal carcasses in burial sites no longer occurring after a maximum period of 20 years and livestock specific pathogens (e.g. foot-and-mouth disease) is considered unlikely to survive more than 40 days in a burial cell (Kansas State University – National Agricultural Biosecurity Center, 2004, *Carcass Disposal: A Comprehensive Review*).

6.5 SITE WIDE

A total of 9 soil samples collected on the northern boundary of the site, proximal to the Werris Creek to Mungindi Railway, were submitted for analysis of asbestos, however no asbestos fragments, fibres or fines were detected. Accordingly, the concentration of asbestos in soil is considered to be less than the adopted assessment criterion, based on the absence of bonded particles and free fibres containing asbestos. Asbestos bundles have previously been recorded in soil samples proximal to the northern boundary of the site (New Environment, 2006), however the concentration of fibres in soil was not determined. Accordingly, whilst it cannot be established whether the previously recorded concentration of asbestos in soil exceeded the adopted HSL, the risk to human health from inhalation of asbestos fibres is considered to be negligible, based on:

- The source of previously identified asbestos bundles is considered to be attributable to *“train brake dust or other vehicle”* (New Environment, 2006). Asbestos is no longer being utilised transport braking mechanisms;
- Air monitoring over two days at 12 locations at the site in separate events (New Environment, 2006 and SLR, 2011) did not identify airborne asbestos above the laboratory detection limit (<0.01 fibres/mL) at any monitoring location; and

⁴ Climate data sourced from Bureau of Meteorology, Climate statistics for Australian locations: Gunnedah Resource Centre, Site number: 055024

- Current soil sampling undertaken at the northern boundary of the site did not detect the presence of asbestos fragments, fibres or fines, and the concentration of asbestos in soil was considered to be below the adopted assessment criterion.

Conclusions and Recommendations

7.1 CONTAMINATION STATUS

Overall, analytical results of samples collected across the site are indicative of concentrations of COPC in soil being below the site investigation levels for all samples collected and analysed, with the solitary exception of the soil sample collected at location CH09.

Geolyse considers the findings of the P2 DSI establish that Zone 3 is suitable for commercial / industrial land uses with respect to contamination impacts, whilst management of the following localised contamination impacts will render Zones 1, 2 and 4 as suitable for commercial / industrial land uses:

- Bonded fragments of fibrous cement material likely to contain asbestos (considered to be from disrepair of site structures) were identified to be present in limited locations on the soil surface or atop paved surfaces in Zone 1 only. . Geolyse notes that sampling and analysis did not reveal any asbestos impacts (fragments, fibres or fines) in surface soils, and asbestos impacts were considered to therefore be limited to this building debris in Zone 1;
- Hydrocarbon contamination exceeding site investigation levels at location CH09, to the east of the former store in Zone 1. From review of chromatogram readings it is considered that this is likely to be weathered coal (attributed to the nearby boiler) rather than gross contamination;
- Soil proximal to the former boiler room in Zone 1 did not meet the adopted aesthetic criteria for the site;
- Uncharacterised stockpiles comprised of a mixture of soil and demolition waste present in the southern portion of Zone 2; and
- Demolition waste and buried animal carcasses present in Zone 4.

7.2 RECOMMENDED REMEDIAL WORKS

Remedial works recommended to be undertaken at the site follow approaches associated with exposure prevention (i.e. on-site containment) and source removal (i.e. off-site disposal).

7.2.1 ON-SITE CONTAINMENT

It is recommended that the demolition waste and buried animal carcasses present in Zone 4 remain in-situ and undisturbed. Aesthetic limitations may be managed by reinstatement with virgin excavated natural material (VENM) to a thickness of 0.5 m above the existing grade. Construction of this containment barrier will minimise infiltration of surface water and reduce potential for leachate production and migration.

Uncharacterised stockpiles present in Zone 2 are proposed to be assessed against the adopted site investigation levels described in **Section 3** of this P2 DSI. The leachable concentration of COPCs using the Australian Standard Leaching Procedure (ASLP), described in Australian Standards AS4439.2 and 44396.3, is also to be compared to trigger values provided in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 2000).

Stockpiles assessed to comply with the adopted criteria may be transported to the dump area within Zone 4 and deposited within the existing void space prior to construction of the containment barrier. Overfilling of the dump area above the natural grade is to be prevented. Stockpiled material which does not comply with the adopted criteria, as well as material surplus to the Zone 4 void volume, must be classified in accordance with the NSW EPA 'Waste Classification Guidelines – Part 1: Classifying Waste' (2014) and disposed off-site, as discussed below.

7.2.2 OFF-SITE DISPOSAL

The soil surface in Zone 1 must be made free of fragments of fibrous cement sheeting considered to contain asbestos. Remediation of surface asbestos impacts is to be conducted in accordance with the NSW WorkCover documents '*How to Safely Remove Asbestos – Code of Practice*' (2011) *Section 7.1 "Removing asbestos contaminated soil"* and '*Managing Asbestos In or On Soil*', (March 2014) , with specific reference to the following:

- Only a class A or B asbestos removal licence holder may conduct the asbestos removal work.
- An air monitoring program must be implemented during remediation to ensure the control measures do not release airborne asbestos fibres.
- Fragments of non-friable asbestos (e.g. fibro cement) on the soil surface are to be removed by hand-picking, tilling or screening (applying suitable work health and safety practices). A grid pattern will be applied to ensure a structured and systematic approach to assessment and removal.
- Upon completion, no visible asbestos fragments is to be present on the surface. Where practicable, the top 10 cm of wetted soil would be gently raked to expose any residual asbestos fragments. The collected material is then securely wrapped in plastic sheeting and taken to an appropriate landfill.
- Soil sampling will be conducted to confirm remediation activities have not resulted in release of asbestos fibres from fragments.
- Once the licensed asbestos removal work has been completed, a clearance inspection is to be carried out and a clearance certificate issued by an 'independent licensed asbestos assessor' or an 'independent competent person'. The clearance certificate will document the results of the inspection, air monitoring and soil validation sampling.

Whilst it is noted that site contamination impacts from asbestos are considered to be limited to fragments of bonded material at the soil surface, and building materials containing asbestos do not require specific consideration under SEPP 55, removal of **all** asbestos materials (i.e. building materials and bonded fragments) is proposed prior to development within Zone 1 commencing. The presence of asbestos containing building materials in their degraded state may be perceived as a potential source of future contamination at the site, and accordingly removal of such materials is considered the most practicable approach to management of future impacts.

Asbestos clearance certification (or re-certification) of soil surfaces adjacent to structures where asbestos containing materials were removed will occur following completion of asbestos removal activities within Zone 1. An exclusion area surrounding Zone 1, by means of security fencing, will minimise potential for unauthorised access to the site and subsequent damage (i.e. vandalism) of asbestos containing building materials in the interim.

The soil proximal to the former boiler room in Zone 1 did not meet the adopted aesthetic criteria for the site. Based on the proposed commercial / industrial land uses, impacted soil should not be present at the ground surface and is recommended to be excavated to a depth of 0.5 m for off-site disposal, followed by reinstatement with VENM and/or a paved surface.

Hydrocarbon contamination at location CH09, to the east of the former store in Zone 1, is considered to be attributed to coal, and may be managed in accordance with aesthetic impacts described above. Subsequent to development at the site, a Site Environmental Management Plan (SEMP) would be required prior to adopting the proposed land use of the redevelopment. The SEMP would document Work Health and Safety (WHS) risk mitigation controls to be administered by site management and implemented by site personnel, should maintenance activities require disturbance of soil below 0.5 m depth or paved surfaces in this vicinity of the site.

Alternatively, excavation and off-site disposal may be conducted at the impacted area until residual soil does not contain COPC concentrations above the adopted site investigation levels or infrastructure prevents further removal. In order to remove all impacted soil the following chase out protocol will be adhered to:

1. At excavation walls identified as having residual soil impacts exceeding criteria specified in **Section 3**, excavate a further 0.5 to 1.0 m beyond the existing wall or wall segment (if practicable, and depending on the extent of the identified impact);
2. If impacts are observed on surface of newly formed wall (based on PID reading, visual & olfactory observations), repeat step 1 until minimal impacts are identified;
3. Collect validation samples from the newly formed wall;
4. If analytical results of validation samples indicate residual soil impacts exceeding remediation assessment criteria, contingency methodologies may be implemented.

As a vapour intrusion / inhalation risk has not been identified, impacts which are identified to extend below structures not scheduled for demolition may remain in-situ, provided that concentrations of COPC are not identified to be increasing in the direction of the structure.

Soil to be disposed off-site first requires classification in accordance with the NSW EPA 'Waste Classification Guidelines – Part 1: Classifying Waste' (2014). Soil requiring disposal shall be sampled and analysed to provide a minimum of 1 analysis per 25 m³ of material that will be generated.

7.3 SUMMARY

This P2 DSI was prepared with consideration of the SEPP 55 Guidelines (1998) in assessing the potential for the proposed development to increase the risk of exposure to contamination. Geolyse considers the findings of the P2 DSI establish the site is suitable, or can and will be made suitable, for the proposed development.

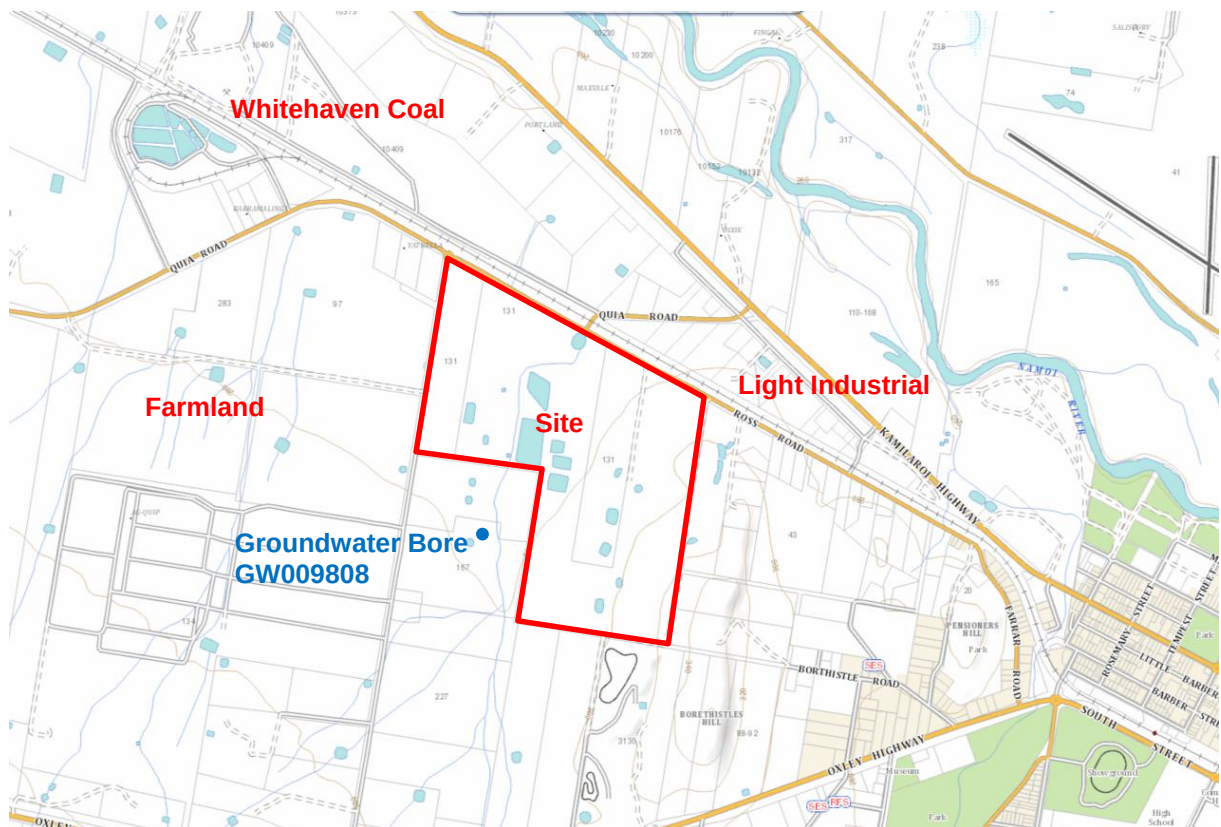
Overall, the majority of the site including the whole of Zone 3 is considered to be suitable for commercial / industrial land use(s) with respect to contamination impacts. Completion of recommended remedial and validation works to manage localised contamination impacts in Zones 1, 2 and 4 (described in **Section 7.2** of this P2 DSI) will render the remainder of the site as suitable for commercial / industrial land uses.

To avoid any perception of ongoing risk to adjoining areas, the hazardous materials identification, remediation and removal from structures located in Zone 1, although outside the application of SEPP 55, would occur in conjunction with the remediation measures identified within this P2 DSI. This identification, remediation and removal work would be carried out by a licenced hygienist (as required) and in accordance with this P2 DSI (where relevant) and all relevant requirements of the Work Health and Safety legislation and accompanying guidelines and codes of practice.

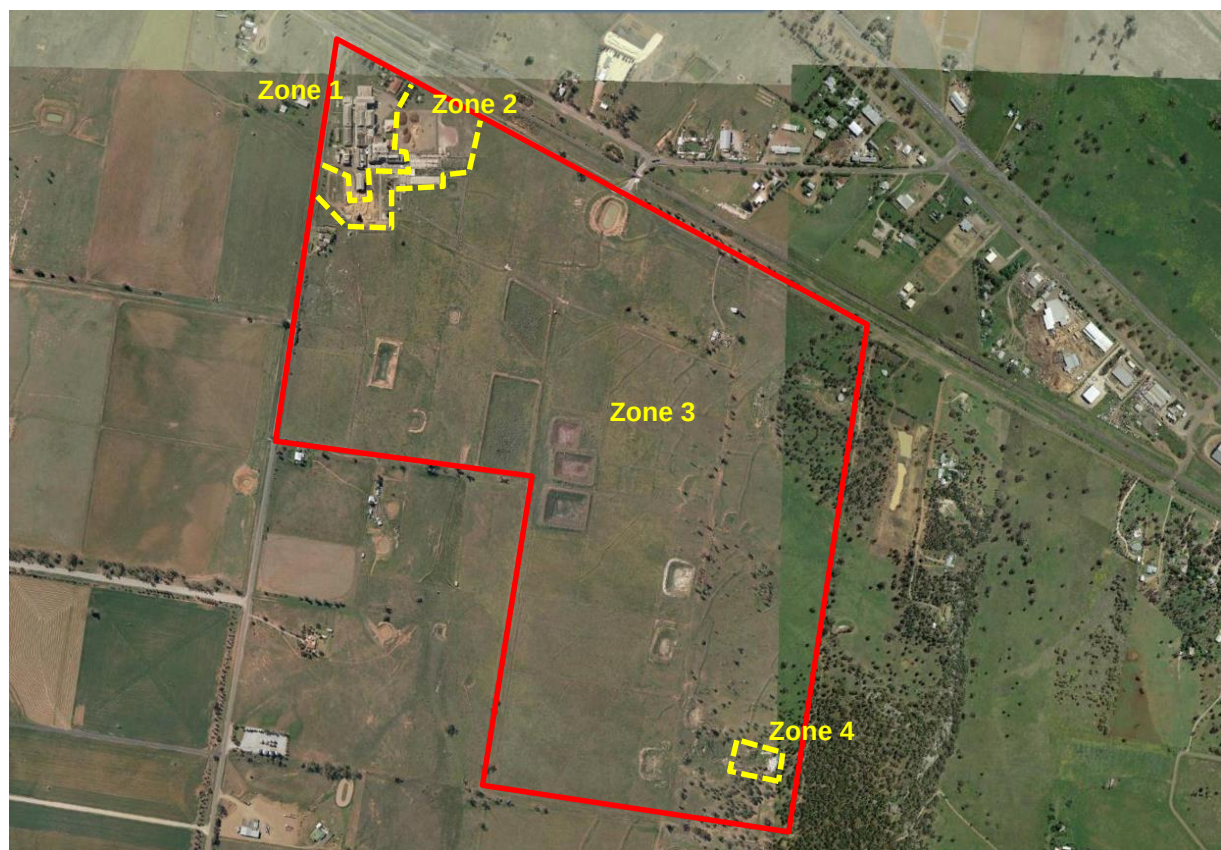
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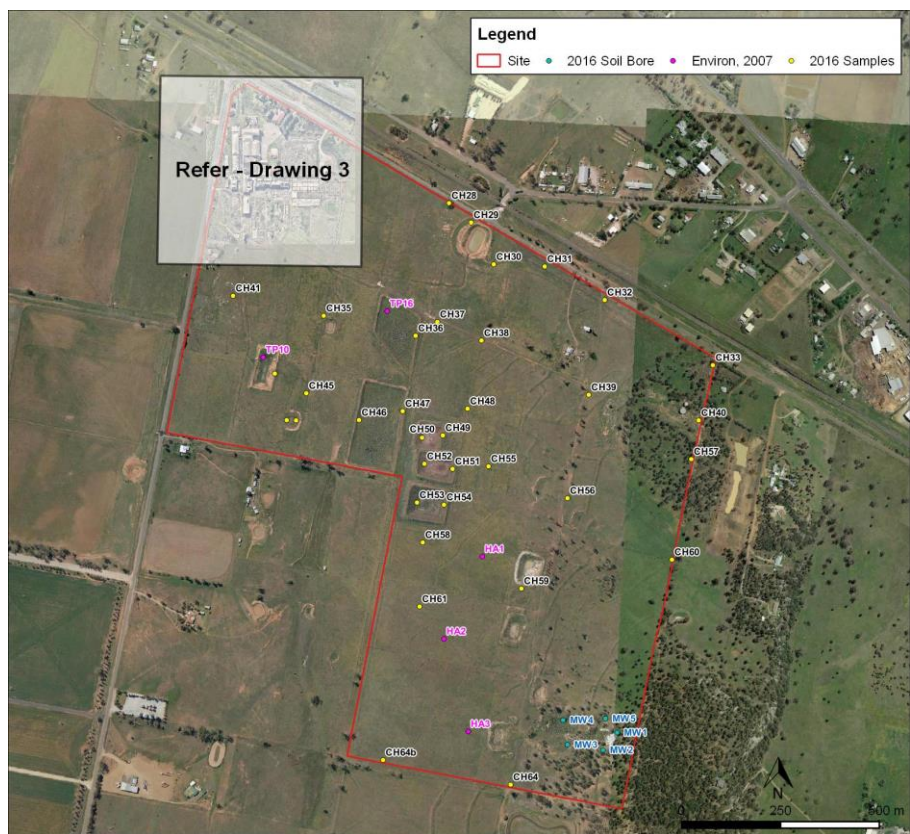
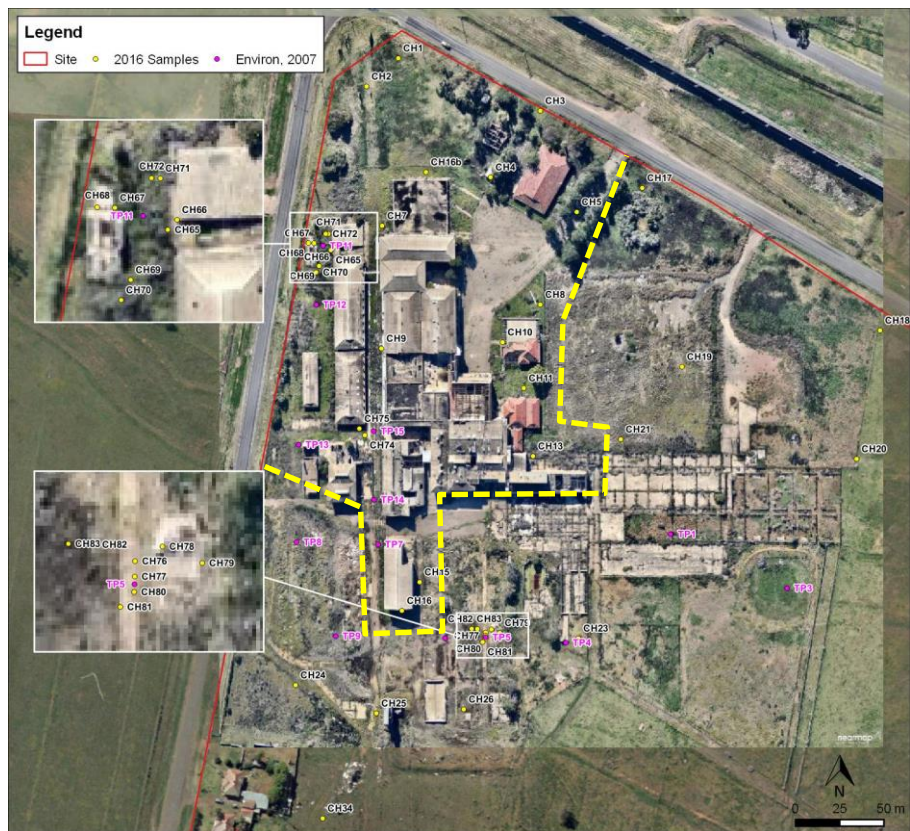
Drawings



Drawing 1: Site Location Map



Drawing 2: Site Investigation Areas



Tables

**Table 1: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 1**

				Sample ID	CH01	CH01	CH02	CH03	CH04	CH05	CH07	CH08	CH09	CH10	CH11	CH11	CH13	CH15	CH16	CH16B	
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	FD	PS	PS	PS	PS	PS	PS	PS	PS	PS	FD	PS	PS	PS	PS	
Group	Analyte	LOR	Units	Criteria																	
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	10.1	9.1	9.4	11.5	11	8.9	6.1	9.4	26.7	9.8	11.6	12	11	25	9.2	10.4	
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	
	Sample weight (dry)	g	0.01	-	33.6	-	26.8	30.5	37.5	36.9	24	25	11	34.6	22.4	-	25.2	15.9	45.1	42.9	
Total Metals by ICP-AES	Arsenic	mg/kg	5	3000	<5	<4	<5	<5	<5	<5	<5	<5	9	<5	<5	<4	<5	15	8	<5	
	Cadmium	mg/kg	1	900	<1	<0.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	1	<1	<1	<1	
	Chromium	mg/kg	2	3600	38	41	46	36	45	23	26	32	25	23	43	40	55	18	32	26	
	Copper	mg/kg	5	240000	13	11	14	14	15	20	22	22	107	25	22	18	21	18	15	21	
	Lead	mg/kg	5	1500	21	20	17	30	16	10	16	16	72	16	12	12	21	28	13	12	
	Nickel	mg/kg	2	6000	15	13	14	12	18	14	15	14	27	18	60	50	20	9	23	16	
	Zinc	mg/kg	5	400000	67	67	64	51	44	37	360	63	825	103	112	85	90	395	53	135	
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	730	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Polychlorinated Biphenyls (PCB)	Total Polychlorinated biphenyls	mg/kg	0.1	7	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDE	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDT	mg/kg	0.2	-	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	
	Aldrin	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	alpha-BHC	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	alpha-Endosulfan	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	beta-BHC	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	beta-Endosulfan	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	cis-Chlordane	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	delta-BHC	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Dieldrin	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.09	<0.05	1.27	0.06	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Endosulfan (sum)	mg/kg	0.05	2000	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
	Endosulfan sulfate	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Endrin	mg/kg	0.05	100	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Endrin aldehyde	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Endrin ketone	mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
	gamma-BHC	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Heptachlor	mg/kg	0.05	50	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Heptachlor epoxide	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Hexachlorobenzene (HCB)	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
	Methoxychlor	mg/kg	0.2	2500	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.09	<0.05	1.27	0.06	<0.05	-	<0.05	<0.05	<0.05	<0.05	
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
	Total Chlordane (sum)	mg/kg	0.05	530	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.07	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
	trans-Chlordane	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05
	Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05
		Bromophos-ethyl	mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05
Carbophenothion		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Chlorfenvinphos		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Chlorpyrifos		mg/kg	0.05	2000	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Chlorpyrifos-methyl		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Demeton-S-methyl		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Diazinon		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Dichlorvos		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Dimethoate		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Ethion		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Fenamiphos		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Fenthion		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Malathion		mg/kg	0.05	-	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Monocrotophos		mg/kg	0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	
Parathion		mg/kg	0.2	-	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	
Parathion-methyl		mg/kg	0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	
Pirimphos-ethyl		mg/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	
Prothiofos		me/kg	0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	

Table 1: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 1

				Sample ID	CH01	CH01	CH02	CH03	CH04	CH05	CH07	CH08	CH09	CH10	CH11	CH11	CH13	CH15	CH16	CH16B
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	FD	PS	PS	PS	PS	PS	PS	PS	PS	PS	FD	PS	PS	PS	PS
Group	Analyte	LOR	Units	Criteria																
Phenolic Compounds	2,4,5-Trichlorophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2,4,6-Trichlorophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2,4-Dichlorophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2,4-Dimethylphenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2,6-Dichlorophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2-Chlorophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2-Methylphenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	2-Nitrophenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	3- & 4-Methylphenol	mg/kg	1	-	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1
	4-Chloro-3-methylphenol	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	Pentachlorophenol	mg/kg	2	660	< 2	-	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	-	< 2	< 2	< 2	< 2
	Phenol	mg/kg	0.5	240000	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	57.3	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	0.7	< 0.5
	Anthracene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	177	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	426	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	2	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	< 0.5	0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	308	< 0.5	< 0.5	< 0.05	< 0.5	< 0.5	3.4	< 0.5
	Benzo(b)fluoranthene	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	379	< 0.5	< 0.5	-	< 0.5	< 0.5	3.3	< 0.5
	Benzo(g,h,i)perylene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	115	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	1.8	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	141	< 0.5	< 0.5	-	< 0.5	< 0.5	1	< 0.5
	Chrysene	mg/kg	0.5	-	< 0.5	0.1	< 0.5	< 0.5	< 0.5	< 0.5	2.7	< 0.5	390	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	2.2	< 0.5
	Dibenz(a,h)anthracene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	23.3	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5	-	< 0.5	0.2	< 0.5	< 0.5	< 0.5	< 0.5	7.2	< 0.5	1050	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	2.7	< 0.5
	Fluorene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	33.7	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	90.2	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	1.4	< 0.5
	Naphthalene (Ex SVOC)	mg/kg	0.5	9	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5	-	< 0.5	0.1	< 0.5	< 0.5	< 0.5	< 0.5	1.7	< 0.5	521	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	0.6	< 0.5
	Pyrene	mg/kg	0.5	-	< 0.5	0.2	< 0.5	< 0.5	< 0.5	< 0.5	7.1	< 0.5	951	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	4.8	< 0.5
	Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	40	0.6	< 0.5	0.6	0.6	0.6	0.6	3.3	0.6	440	0.6	0.6	< 0.5	0.6	0.6	4.5	0.6
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	-	1.2	< 0.5	1.2	1.2	1.2	3.5	1.2	440	1.2	1.2	< 0.5	1.2	1.2	4.7	1.2	1.2
	Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3	< 0.5	440	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.2	< 0.5
	Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	4000	< 0.5	0.95	< 0.5	< 0.5	< 0.5	< 0.5	31.2	< 0.5	4690	< 0.5	< 0.5	< 0	< 0.5	< 0.5	23.9	< 0.5
Total Petroleum Hydrocarbons	C6 - C9 Fraction	mg/kg	10	-	< 10	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10
	C10 - C14 Fraction	mg/kg	50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	C15 - C28 Fraction	mg/kg	100	-	< 100	< 100	< 100	< 100	< 100	< 100	190	< 100	7750	< 100	< 100	< 100	550	220	160	< 100
	C29 - C36 Fraction	mg/kg	100	-	< 100	< 100	< 100	< 100	< 100	< 100	120	< 100	3670	< 100	140	< 100	520	120	180	< 100
	C10 - C36 Fraction (sum)	mg/kg	50	-	< 50	-	< 50	< 50	< 50	< 50	310	< 50	11600	< 50	140	-	1070	340	340	< 50
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	C6 - C10 Fraction	mg/kg	10	700	< 10	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10
	C6 - C10 Fraction minus BTEX (F1)	mg/kg	10	260	< 10	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10
	>C10 - C16 Fraction	mg/kg	50	1000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	280	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg	50	560	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	280	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	>C16 - C34 Fraction	mg/kg	100	3500	< 100	< 100	< 100	< 100	< 100	< 100	260	< 100	10300	< 100	140	< 100	970	320	300	< 100
	>C34 - C40 Fraction	mg/kg	100	10000	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	2050	< 100	130	< 100	160	< 100	190	< 100
	>C10 - C40 Fraction (sum)	mg/kg	50	-	< 50	-	< 50	< 50	< 50	< 50	260	< 50	12600	< 50	270	-	1130	320	490	< 50
BTEXN	Benzene	mg/kg	0.2	3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Toluene	mg/kg	0.5	560	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Ethylbenzene	mg/kg	0.5	64	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5
	meta- & para-Xylene	mg/kg	0.5	-	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5
	ortho-Xylene	mg/kg	0.5	-	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5
	Total Xylenes	mg/kg	0.5	230	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5
	Sum of BTEX	mg/kg	0.2	-	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2
	Naphthalene	mg/kg	1	9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

PS Primary Sample
FD Field Duplicate
mg/kg milligrams per kilogram
g/kg grams per kilogram
LOR limit of reporting
Criteria HILs and HSLs from National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC 2013)

within criteria
criteria exceeded

Table 1: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 1

				Sample ID	CH65	CH66	CH67	CH68	CH69	CH70	CH71	CH72	CH74	CH75
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
Group	Analyte	LOR	Units	Criteria										
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	12.2	6.7	11	10.8	11.2	10.3	14.9	14.2	9.5	3.6
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	ND	-	-	-	-	-	-	-	ND	-
	Sample weight (dry)	g	0.01	-	24.4	-	-	-	-	-	-	-	44.1	-
Total Metals by ICP-AES	Arsenic	mg/kg	5	3000	-	-	-	-	-	-	-	-	< 5	< 5
	Cadmium	mg/kg	1	900	-	-	-	-	-	-	-	-	< 1	2
	Chromium	mg/kg	2	3600	-	-	-	-	-	-	-	-	32	20
	Copper	mg/kg	5	240000	-	-	-	-	-	-	-	-	36	79
	Lead	mg/kg	5	1500	-	-	-	-	-	-	-	-	14	42
	Nickel	mg/kg	2	6000	-	-	-	-	-	-	-	-	19	20
	Zinc	mg/kg	5	400000	-	-	-	-	-	-	-	-	137	347
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	730	-	-	-	-	-	-	-	-	< 0.1	< 0.1
Polychlorinated Biphenyls (PCB)	Total Polychlorinated biphenyls	mg/kg	0.1	7	-	-	-	-	-	-	-	-	-	-
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	4,4'-DDE	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	4,4'-DDT	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-
	Aldrin	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	alpha-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	alpha-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	beta-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	beta-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	cis-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	delta-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dieldrin	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Endosulfan (sum)	mg/kg	0.05	2000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Endosulfan sulfate	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Endrin	mg/kg	0.05	100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Endrin aldehyde	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Endrin ketone	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	gamma-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Heptachlor	mg/kg	0.05	50	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Heptachlor epoxide	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Hexachlorobenzene (HCB)	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Methoxychlor	mg/kg	0.2	2500	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Total Chlordane (sum)	mg/kg	0.05	530	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	trans-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Bromophos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Carbophenothion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Chlorfenvinphos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Chlorpyrifos	mg/kg	0.05	2000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Chlorpyrifos-methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Demeton-S-methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Diazinon	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dichlorvos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dimethoate	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Ethion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Fenamiphos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Fenthion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Malathion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Monocrotophos	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-
	Parathion	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-
	Parathion-methyl	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-
	Pirimphos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Prothiofos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-

Table 1: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 1

				Sample ID	CH65	CH66	CH67	CH68	CH69	CH70	CH71	CH72	CH74	CH75
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
Group	Analyte	LOR	Units	Criteria										
Phenolic Compounds	2,4,5-Trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2,4,6-Trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2,4-Dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2,4-Dimethylphenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2,6-Dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2-Chlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2-Methylphenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	2-Nitrophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	3- & 4-Methylphenol	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-
	4-Chloro-3-methylphenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
	Pentachlorophenol	mg/kg	2	660	-	-	-	-	-	-	-	-	-	-
	Phenol	mg/kg	0.5	240000	-	-	-	-	-	-	-	-	-	-
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(b+j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(g,h,i)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Dibenz(a,h)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Naphthalene (Ex SVOC)	mg/kg	0.5	9	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	40	-	-	-	-	-	-	-	-	0.6	0.6
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	1.2	1.2
	Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	4000	-	-	-	-	-	-	-	-	< 0.5	< 0.5
Total Petroleum Hydrocarbons	C6 - C9 Fraction	mg/kg	10	-	-	-	-	-	-	-	-	-	< 10	< 10
	C10 - C14 Fraction	mg/kg	50	-	-	-	-	-	-	-	-	-	< 50	< 50
	C15 - C28 Fraction	mg/kg	100	-	-	-	-	-	-	-	-	-	< 100	350
	C29 - C36 Fraction	mg/kg	100	-	-	-	-	-	-	-	-	-	< 100	260
	C10 - C36 Fraction (sum)	mg/kg	50	-	-	-	-	-	-	-	-	-	< 50	610
	C6 - C10 Fraction	mg/kg	10	700	-	-	-	-	-	-	-	-	< 10	< 10
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	C6 - C10 Fraction minus BTEX (F1)	mg/kg	10	260	-	-	-	-	-	-	-	-	< 10	< 10
	>C10 - C16 Fraction	mg/kg	50	1000	-	-	-	-	-	-	-	-	< 50	< 50
	>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg	50	560	-	-	-	-	-	-	-	-	< 50	< 50
	>C16 - C34 Fraction	mg/kg	100	3500	-	-	-	-	-	-	-	-	< 100	580
	>C34 - C40 Fraction	mg/kg	100	10000	-	-	-	-	-	-	-	-	< 100	130
	>C10 - C40 Fraction (sum)	mg/kg	50	-	-	-	-	-	-	-	-	-	< 50	710
BTEXN	Benzene	mg/kg	0.2	3	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Toluene	mg/kg	0.5	560	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Ethylbenzene	mg/kg	0.5	64	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	meta- & para-Xylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	ortho-Xylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Total Xylenes	mg/kg	0.5	230	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Sum of BTEX	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Naphthalene	mg/kg	1	9	-	-	-	-	-	-	-	-	< 1	< 1

PS Primary Sample
FD Field Duplicate
mg/kg milligrams per kilogram
g/kg grams per kilogram
LOR limit of reporting
Criteria HILs and HSLs from *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013)

within criteria
criteria exceeded

**Table 2: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 2**

				Sample ID	CH17	CH18	CH19	CH20	CH21	CH21	CH23	CH24	CH25	CH26	CH76	CH77	CH78	CH79	CH80	CH81	
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	PS	PS	PS	FD	PS	PS	PS	PS	PS	PS	PS	PS	PS	
Group	Analyte	LOR	Units	Criteria																	
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	16	17	9.7	16.8	10.4	10	9.7	11	11.4	12.2	11.1	10.2	7.7	11.5	14.1	11.4	
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	-	-	-	
	Sample weight (dry)	g	0.01	-	36.6	24.5	38.1	21.6	27	-	34.3	32.7	25	26.8	56.7	-	-	-	-	-	
Total Metals by ICP-AES	Arsenic	mg/kg	5	3000	6	6	15	<5	12	6	<5	5	17	6	-	-	-	-	-	-	
	Cadmium	mg/kg	1	900	<1	<1	<1	<1	<1	<0.4	<1	<1	<1	<1	-	-	-	-	-	-	
	Chromium	mg/kg	2	3600	40	34	5	36	3	3	40	58	12	11	-	-	-	-	-	-	
	Copper	mg/kg	5	240000	15	18	10	19	7	6	18	16	29	19	-	-	-	-	-	-	
	Lead	mg/kg	5	1500	17	18	15	13	15	12	11	22	28	15	-	-	-	-	-	-	
	Nickel	mg/kg	2	6000	21	20	16	18	11	9	17	16	11	17	-	-	-	-	-	-	
	Zinc	mg/kg	5	400000	38	74	51	171	38	37	106	604	194	82	-	-	-	-	-	-	
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	730	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	
Polychlorinated Biphenyls (PCB)	Total Polychlorinated biphenyls	mg/kg	0.1	7	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDE	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDT	mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
	Aldrin	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	alpha-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	alpha-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	beta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	beta-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	cis-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	delta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Dieldrin	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.72	1.46	<0.05	<0.05	
	Endosulfan (sum)	mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan sulfate	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin	mg/kg	0.05	100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin aldehyde	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin ketone	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	gamma-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Heptachlor	mg/kg	0.05	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Heptachlor epoxide	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Hexachlorobenzene (HCB)	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Methoxychlor	mg/kg	0.2	2500	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.72	1.46	<0.05	<0.05	
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Total Chlordane (sum)	mg/kg	0.05	530	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	trans-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		Bromophos-ethyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chlorfenvinphos		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chlorpyrifos		mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chlorpyrifos-methyl		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Demeton-S-methyl		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Diazinon		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dichlorvos		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dimethoate		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethion		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Fenamiphos		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Fenthion		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Malathion		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Monocrotophos		mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Parathion		mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Parathion-methyl		mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Pirimphos-ethyl		mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Prothiofos		me/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

Table 2: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 2

				Sample ID	CH17	CH18	CH19	CH20	CH21	CH21	CH23	CH24	CH25	CH26	CH76	CH77	CH78	CH79	CH80	CH81
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	PS	PS	FD	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
Group	Analyte	LOR	Units	Criteria																
Phenolic Compounds	2,4,5-Trichlorophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2,4,6-Trichlorophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2,4-Dichlorophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2,4-Dimethylphenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2,6-Dichlorophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2-Chlorophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2-Methylphenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	2-Nitrophenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	3- & 4-Methylphenol	mg/kg	1	-	< 1	< 1	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-
	4-Chloro-3-methylphenol	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Pentachlorophenol	mg/kg	2	660	< 2	< 2	< 2	< 2	< 2	-	< 2	< 2	< 2	< 2	-	-	-	-	-	-
	Phenol	mg/kg	0.5	240000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
Polynuclear Aromatic Hydrocarbons	Acenaphthene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Acenaphthylene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Anthracene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benz(a)anthracene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(a)pyrene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.05	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(b+j)fluoranthene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(g,h,i)perylene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(k)fluoranthene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Chrysene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Dibenz(a,h)anthracene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Fluoranthene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Fluorene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Naphthalene (Ex SVOC)	mg/kg	0.5	9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Phenanthrene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Pyrene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	40	0.6	0.6	0.6	0.6	0.6	< 0.5	0.6	0.6	0.6	0.6	-	-	-	-	-	-
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	-	1.2	1.2	1.2	1.2	1.2	< 0.5	1.2	1.2	1.2	1.2	-	-	-	-	-	-
	Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	4000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0	< 0.5	< 0.5	0.7	< 0.5	-	-	-	-	-	-
Total Petroleum Hydrocarbons	C6 - C9 Fraction	mg/kg	10	-	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10	-	-	-	-	-	-
	C10 - C14 Fraction	mg/kg	50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	-	-	-	-	-
	C15 - C28 Fraction	mg/kg	100	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	190	< 100	-	-	-	-	-	-
	C29 - C36 Fraction	mg/kg	100	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	140	< 100	-	-	-	-	-	-
	C10 - C36 Fraction (sum)	mg/kg	50	-	< 50	< 50	< 50	< 50	< 50	-	< 50	< 50	330	< 50	-	-	-	-	-	-
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	C6 - C10 Fraction	mg/kg	10	700	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10	-	-	-	-	-	-
	C6 - C10 Fraction minus BTEX (F1)	mg/kg	10	260	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 10	< 10	< 10	-	-	-	-	-	-
	>C10 - C16 Fraction	mg/kg	50	1000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	-	-	-	-	-
	>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg	50	560	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	-	-	-	-	-	-
	>C16 - C34 Fraction	mg/kg	100	3500	< 100	< 100	< 100	< 100	< 100	< 100	100	< 100	280	< 100	-	-	-	-	-	-
	>C34 - C40 Fraction	mg/kg	100	10000	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	-	-	-	-	-	-
	>C10 - C40 Fraction (sum)	mg/kg	50	-	< 50	< 50	< 50	< 50	< 50	-	100	< 50	280	< 50	-	-	-	-	-	-
BTEXN	Benzene	mg/kg	0.2	3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-	-	-	-	-
	Toluene	mg/kg	0.5	560	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Ethylbenzene	mg/kg	0.5	64	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	meta- & para-Xylene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	ortho-Xylene	mg/kg	0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Total Xylenes	mg/kg	0.5	230	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Sum of BTEX	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	-	-	-	-	-	-
	Naphthalene	mg/kg	1	9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-	-

PS Primary Sample
FD Field Duplicate
mg/kg milligrams per kilogram
g/kg grams per kilogram
LOR limit of reporting
Criteria HILs and HSLs from *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013)

within criteria
criteria exceeded

Table 2: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 2

				Sample ID	CH82	CH83
				Sample Date	4/02/2016	4/02/2016
				Sample Type	PS	PS
Group	Analyte	LOR	Units	Criteria		
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	3.1	10
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	-	-
	Sample weight (dry)	g	0.01	-	-	-
Total Metals by ICP-AES	Arsenic	mg/kg	5	3000	-	-
	Cadmium	mg/kg	1	900	-	-
	Chromium	mg/kg	2	3600	-	-
	Copper	mg/kg	5	240000	-	-
	Lead	mg/kg	5	1500	-	-
	Nickel	mg/kg	2	6000	-	-
	Zinc	mg/kg	5	400000	-	-
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	730	-	-
Polychlorinated Biphenyls (PCB)	Total Polychlorinated biphenyls	mg/kg	0.1	7	-	-
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	< 0.05	< 0.05
	4,4'-DDE	mg/kg	0.05	-	< 0.05	< 0.05
	4,4'-DDT	mg/kg	0.2	-	< 0.2	< 0.2
	Aldrin	mg/kg	0.05	-	< 0.05	< 0.05
	alpha-BHC	mg/kg	0.05	-	< 0.05	< 0.05
	alpha-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05
	beta-BHC	mg/kg	0.05	-	< 0.05	< 0.05
	beta-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05
	cis-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05
	delta-BHC	mg/kg	0.05	-	< 0.05	< 0.05
	Dieldrin	mg/kg	0.05	-	< 0.05	< 0.05
	Endosulfan (sum)	mg/kg	0.05	2000	< 0.05	< 0.05
	Endosulfan sulfate	mg/kg	0.05	-	< 0.05	< 0.05
	Endrin	mg/kg	0.05	100	< 0.05	< 0.05
	Endrin aldehyde	mg/kg	0.05	-	< 0.05	< 0.05
	Endrin ketone	mg/kg	0.05	-	< 0.05	< 0.05
	gamma-BHC	mg/kg	0.05	-	< 0.05	< 0.05
	Heptachlor	mg/kg	0.05	50	< 0.05	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	< 0.05	< 0.05
	Hexachlorobenzene (HCB)	mg/kg	0.05	-	< 0.05	< 0.05
	Methoxychlor	mg/kg	0.2	2500	< 0.2	< 0.2
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	< 0.05	< 0.05
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	< 0.05	< 0.05
	Total Chlordane (sum)	mg/kg	0.05	530	< 0.05	< 0.05
	trans-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05
Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	< 0.05	< 0.05
	Bromophos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05
	Carbophenothion	mg/kg	0.05	-	< 0.05	< 0.05
	Chlorfenvinphos	mg/kg	0.05	-	< 0.05	< 0.05
	Chlorpyrifos	mg/kg	0.05	2000	< 0.05	< 0.05
	Chlorpyrifos-methyl	mg/kg	0.05	-	< 0.05	< 0.05
	Demeton-S-methyl	mg/kg	0.05	-	< 0.05	< 0.05
	Diazinon	mg/kg	0.05	-	< 0.05	< 0.05
	Dichlorvos	mg/kg	0.05	-	< 0.05	< 0.05
	Dimethoate	mg/kg	0.05	-	< 0.05	< 0.05
	Ethion	mg/kg	0.05	-	< 0.05	< 0.05
	Fenamiphos	mg/kg	0.05	-	< 0.05	< 0.05
	Fenthion	mg/kg	0.05	-	< 0.05	< 0.05
	Malathion	mg/kg	0.05	-	< 0.05	< 0.05
	Monocrotophos	mg/kg	0.2	-	< 0.2	< 0.2
	Parathion	mg/kg	0.2	-	< 0.2	< 0.2
	Parathion-methyl	mg/kg	0.2	-	< 0.2	< 0.2
	Pirimphos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05
	Prothiofos	mg/kg	0.05	-	< 0.05	< 0.05

Table 2: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 2

				Sample ID	CH82	CH83
				Sample Date	4/02/2016	4/02/2016
				Sample Type	PS	PS
Group	Analyte	LOR	Units	Criteria		
Phenolic Compounds	2,4,5-Trichlorophenol	mg/kg	0.5	-	-	-
	2,4,6-Trichlorophenol	mg/kg	0.5	-	-	-
	2,4-Dichlorophenol	mg/kg	0.5	-	-	-
	2,4-Dimethylphenol	mg/kg	0.5	-	-	-
	2,6-Dichlorophenol	mg/kg	0.5	-	-	-
	2-Chlorophenol	mg/kg	0.5	-	-	-
	2-Methylphenol	mg/kg	0.5	-	-	-
	2-Nitrophenol	mg/kg	0.5	-	-	-
	3- & 4-Methylphenol	mg/kg	1	-	-	-
	4-Chloro-3-methylphenol	mg/kg	0.5	-	-	-
Polynuclear Aromatic Hydrocarbons	Pentachlorophenol	mg/kg	2	660	-	-
	Phenol	mg/kg	0.5	240000	-	-
	Acenaphthene	mg/kg	0.5	-	-	-
	Acenaphthylene	mg/kg	0.5	-	-	-
	Anthracene	mg/kg	0.5	-	-	-
	Benz(a)anthracene	mg/kg	0.5	-	-	-
	Benzo(a)pyrene	mg/kg	0.5	-	-	-
	Benzo(b+j)fluoranthene	mg/kg	0.5	-	-	-
	Benzo(g,h,i)perylene	mg/kg	0.5	-	-	-
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-
Total Petroleum Hydrocarbons	Chrysene	mg/kg	0.5	-	-	-
	Dibenz(a,h)anthracene	mg/kg	0.5	-	-	-
	Fluoranthene	mg/kg	0.5	-	-	-
	Fluorene	mg/kg	0.5	-	-	-
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-
	Naphthalene (Ex SVOC)	mg/kg	0.5	9	-	-
	Phenanthrene	mg/kg	0.5	-	-	-
	Pyrene	mg/kg	0.5	-	-	-
	Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	40	-	-
	Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	-	-	-
Total Recoverable Hydrocarbons - NEPM 2013 Fractions	Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	-	-	-
	Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	4000	-	-
	C6 - C9 Fraction	mg/kg	10	-	-	-
	C10 - C14 Fraction	mg/kg	50	-	-	-
	C15 - C28 Fraction	mg/kg	100	-	-	-
	C29 - C36 Fraction	mg/kg	100	-	-	-
	C10 - C36 Fraction (sum)	mg/kg	50	-	-	-
	C6 - C10 Fraction	mg/kg	10	700	-	-
	C6 - C10 Fraction minus BTEX (F1)	mg/kg	10	260	-	-
	>C10 - C16 Fraction	mg/kg	50	1000	-	-
BTEXN	>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg	50	560	-	-
	>C16 - C34 Fraction	mg/kg	100	3500	-	-
	>C34 - C40 Fraction	mg/kg	100	10000	-	-
	>C10 - C40 Fraction (sum)	mg/kg	50	-	-	-
	Benzene	mg/kg	0.2	3	-	-
	Toluene	mg/kg	0.5	560	-	-
	Ethylbenzene	mg/kg	0.5	64	-	-
	meta- & para-Xylene	mg/kg	0.5	-	-	-
	ortho-Xylene	mg/kg	0.5	-	-	-
	Total Xylenes	mg/kg	0.5	230	-	-
	Sum of BTEX	mg/kg	0.2	-	-	-
	Naphthalene	mg/kg	1	9	-	-

PS Primary Sample
FD Field Duplicate
mg/kg milligrams per kilogram
g/kg grams per kilogram
LOR limit of reporting
Criteria HILs and HSLs from *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013)

within criteria
criteria exceeded

Table 3: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 3

				Sample ID	CH28	CH29	CH30	CH31	CH31	CH32	CH33	CH34	CH35	CH36	CH37	CH38	CH39	CH40	CH41	CH41	CH42
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	PS	FD	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	FD	PS
Group	Analyte	LOR	Units	Criteria																	
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	7.2	9.5	12.3	13	13	7.1	4	4.6	6	4	7.4	3.7	6.1	6.6	5.8	3.9	8
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	ND	ND	ND	ND	-	ND	ND	-	-	-	-	-	-	-	-	-	-
	Sample weight (dry)	g	0.01	-	21.3	25.7	16	29.8	-	28.6	23	-	-	-	-	-	-	-	-	-	-
Total Metals by ICP-AES	Arsenic	mg/kg	5	20	<5	6	<5	6	5	7	<5	<5	<5	5	<5	<5	5	<5	<5	<4	5
	Cadmium	mg/kg	1	20	<1	<1	<1	<1	<0.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	<1
	Chromium	mg/kg	2	500	36	30	43	72	54	58	29	41	34	28	24	62	62	14	46	43	26
	Copper	mg/kg	5	2000	12	14	18	16	13	16	11	10	15	15	11	10	11	<5	10	9	24
	Lead	mg/kg	5	420	13	14	13	15	15	20	25	10	12	14	8	11	18	36	9	10	16
	Nickel	mg/kg	2	270	14	21	21	28	26	26	12	9	13	20	9	18	19	4	11	10	16
	Zinc	mg/kg	5	2500	40	31	54	58	28	59	94	56	90	28	50	41	83	27	64	37	127
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	4,4'-DDE	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	4,4'-DDT	mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2
	Aldrin	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	alpha-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	alpha-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	beta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	beta-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	cis-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	delta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Dieldrin	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Endosulfan (sum)	mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Endosulfan sulfate	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Endrin	mg/kg	0.05	100	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Endrin aldehyde	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Endrin ketone	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	gamma-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Heptachlor	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Heptachlor epoxide	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Hexachlorobenzene (HCB)	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Methoxychlor	mg/kg	0.2	2500	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Total Chlordane (sum)	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	trans-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Bromophos-ethyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Carbophenothion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Chlorfenvinphos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Chlorpyrifos	mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Chlorpyrifos-methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Demeton-S-methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Diazinon	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Dichlorvos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Dimethoate	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Ethion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
	Fenamiphos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Fenthion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05
	Malathion	mg/kg	0.05	-	<0.05	<0.0															

Table 3: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 3

				Sample ID	CH43	CH44	CH45	CH46	CH47	CH48	CH49	CH50	CH51	CH51	CH52	CH53	CH54	CH55	CH56	CH57	CH58	
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	
				Sample Type	PS	PS	PS	PS	PS	PS	PS	PS	PS	FD	PS	PS	PS	PS	PS	PS	PS	
Group	Analyte	LOR	Units	Criteria																		
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	7.1	5.2	8.9	16.6	10	5.6	8.1	45.6	18.4	17	30.7	19.8	10.5	8.1	11.9	4.1	5.6	
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Sample weight (dry)	g	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Metals by ICP-AES	Arsenic	mg/kg	5	20	<5	<5	<5	7	<5	<5	7	<5	6	4	<5	6	7	5	11	<5	<5	
	Cadmium	mg/kg	1	20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	<1	<1	<1	<1	1	<1	<1	
	Chromium	mg/kg	2	500	28	28	51	24	35	52	30	40	38	33	26	26	56	80	29	28	30	
	Copper	mg/kg	5	2000	13	7	16	102	29	11	21	398	105	81	307	99	26	13	24	<5	9	
	Lead	mg/kg	5	420	10	7	14	26	13	11	11	40	17	14	13	16	16	15	12	16	22	9
	Nickel	mg/kg	2	270	11	7	16	14	10	17	20	15	14	13	16	28	10	22	39	6	14	
	Zinc	mg/kg	5	2500	64	23	97	358	131	66	80	334	301	300	562	266	78	31	78	85	26	
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDE	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	4,4'-DDT	mg/kg	0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
	Aldrin	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	alpha-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	alpha-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	beta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	beta-Endosulfan	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	cis-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	delta-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Dieldrin	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan (sum)	mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endosulfan sulfate	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin	mg/kg	0.05	100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin aldehyde	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Endrin ketone	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	gamma-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Heptachlor	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Heptachlor epoxide	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Hexachlorobenzene (HCB)	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Methoxychlor	mg/kg	0.2	2500	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Total Chlordane (sum)	mg/kg	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	trans-Chlordane	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Bromophos-ethyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Carbophenothion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Chlorfenvinphos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Chlorpyrifos	mg/kg	0.05	2000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Chlorpyrifos-methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Demeton-S-methyl	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Diazinon	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Dichlorvos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Dimethoate	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Ethion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Fenamiphos	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
	Fenthion	mg/kg	0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05		

Table 3: Site Investigation Sampling Results - Former Gunnedah Abattoir
FEBRUARY 2016 - Zone 3

				Sample ID	CH59	CH60	CH61	CH61	CH64	CH64B
				Sample Date	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
				Sample Type	PS	PS	PS	FD	PS	PS
Group	Analyte	LOR	Units	Criteria						
Moisture Content	Moisture Content (dried @ 103°C)	%	1	-	11.2	9.5	8.6	7.1	5.5	5.9
AS 4964 - 2004 Identification of Asbestos in Soils	Asbestos Detected	g/kg	0.1	Nil	-	-	-	-	-	-
	Sample weight (dry)	g	0.01	-	-	-	-	-	-	-
Total Metals by ICP-AES	Arsenic	mg/kg	5	20	6	6	< 5	< 4	10	< 5
	Cadmium	mg/kg	1	20	1	1	< 1	< 0.4	1	< 1
	Chromium	mg/kg	2	500	51	50	35	28	32	48
	Copper	mg/kg	5	2000	14	14	10	9	8	8
	Lead	mg/kg	5	420	18	17	11	11	18	9
	Nickel	mg/kg	2	270	32	36	16	15	16	11
	Zinc	mg/kg	5	2500	48	68	22	22	45	14
Total Recoverable Mercury by FIMS	Mercury	mg/kg	0.1	15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organochlorine Pesticides (OC)	4,4'-DDD	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	4,4'-DDE	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	4,4'-DDT	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
	Aldrin	mg/kg	0.05	0.5	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	alpha-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	alpha-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	beta-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	beta-Endosulfan	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	cis-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	delta-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Dieldrin	mg/kg	0.05	0.5	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Endosulfan (sum)	mg/kg	0.05	2000	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Endosulfan sulfate	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Endrin	mg/kg	0.05	100	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Endrin aldehyde	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Endrin ketone	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	gamma-BHC	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Heptachlor	mg/kg	0.05	0.5	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Hexachlorobenzene (HCB)	mg/kg	0.05	0.5	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Methoxychlor	mg/kg	0.2	2500	< 0.2	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
	Sum of Aldrin + Dieldrin	mg/kg	0.05	45	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Sum of DDD + DDE + DDT	mg/kg	0.05	3600	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Total Chlordane (sum)	mg/kg	0.05	0.5	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	trans-Chlordane	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
Organophosphorus Pesticides (OP)	Azinphos Methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Bromophos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Carbophenothion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Chlorfenvinphos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Chlorpyrifos	mg/kg	0.05	2000	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Chlorpyrifos-methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Demeton-S-methyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Diazinon	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Dichlorvos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Dimethoate	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Ethion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Fenamiphos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Fenthion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Malathion	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05
	Monocrotophos	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2
	Parathion	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	< 0.1	< 0.2	< 0.2
	Parathion-methyl	mg/kg	0.2	-	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2
	Pirimphos-ethyl	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05
	Prothiofos	mg/kg	0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05

PS Primary Sample
FD Field Duplicate
mg/kg milligrams per kilogram
g/kg grams per kilogram
LOR limit of reporting
Criteria HILs and HSLs from *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013); and/or
NSW EPA *Environmental Guidelines: Use and Disposal of Biosolids Products* (2000)
within criteria
criteria exceeded

Table 3: Field QA/QC RPD Results - Former Gunnedah Abattoir

Analyte	Sample ID		CH01		RPD		CH11		RPD		CH21		RPD		CH31		RPD		CH41		RPD		CH51		RPD		CH61		RPD		
	Sample date	Sample type	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	4/02/2016	4/02/2016	PS	FD	
	Sample Type	Sample Type	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	PS	FD	
LOR																															
Moisture Content (dried @ 103°C)	1		10.1	9.1	10%		11.6	12	3%		10.4	10	4%		13	13	0%	5.8	3.9	39%		18.4	17	8%		8.6	7.1	19%			
Arsenic	5		<5	<4	PS/FD<LOR		<5	<4	PS/FD<LOR		12	6	67%		6	18%	<5	<4	PS/FD<LOR		6	4	40%		<5	<4	PS/FD<LOR				
Cadmium	1		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		<1	<0.4	PS/FD<LOR		
Chromium	2		38	41	8%	43	40	7%	3	3	0%	72	54	29%	46	43	7%	38	33	14%	35	28	22%	105	81	26%	10	9	11%		
Copper	5		13	11	17%	22	18	20%	7	6	15%	16	13	21%	10	9	11%	105	81	26%	10	9	11%	105	81	26%	10	9	11%		
Lead	5		21	20	5%	12	12	0%	15	12	22%	15	15	15	15	0%	9	10	11%	17	14	19%	11	11	0%	76	16	15	6%		
Nickel	2		15	13	14%	60	50	18%	11	9	20%	28	26	7%	11	10	10%	14	13	7%	16	15	6%	76	16	15	6%	76	16	15	6%
Zinc	5		67	61	11%	112	81	3%	58	28	28	58	28	70%	66	3%	53%	301	300	0%	22	22	0%	22	22	0%	22	22	0%	22	22
Mercury	0.1		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		<0.1	<0.1	PS/FD<LOR		
4,4'-DDD	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
4,4'-DDE	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
4,4'-DDT	0.2		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		
Aldrin	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
alpha-BHC	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
alpha-Endosulfan	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
beta-BHC	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
beta-Endosulfan	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
cis-Chlordane	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
delta-BHC	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Dieldrin	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Endosulfan sulfate	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Endrin	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Endrin aldehyde	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
gamma-BHC	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Heptachlor	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Heptachlor epoxide	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Hexachlorobenzene (HCB)	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Methoxychlor	0.2		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		
trans-Chlordane	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Azinphos Methyl	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Bromophos-ethyl	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Chlorpyrifos	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Chlorpyrifos-methyl	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Diazinon	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Dichlorvos	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Dimethoate	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Ethion	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Malathion	0.05		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		<0.05	<0.1	PS/FD<LOR		
Parathion	0.2		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		<0.2	<0.1	PS/FD<LOR		
Acephthophene	0.2		<0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acephthophylene	0.2		<0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antracene	0.05		<0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz[a]anthracene	0.05		<0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		0.5	<0.1	PS/FD<LOR		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benz[a]pyrene	0.5		<0.5	0.1	PS/FD<L																										

Comments

Comments

RPD < 30%

RPD $\geq 30\%$. Results $< 10 \times \text{LOR}$

RPD $\geq 30\%$. Results $\geq 10 \times$ LOR

PS - Primary Sample

ED - Field Duplicate

LOR - Limit of Reporting

LOR - Limit of Reporting

Appendix A

SOIL PROFILE REPORT

Analysis Report Soil

PLEASE NOTE: This excel spreadsheet does not constitute an official laboratory analysis report - please refer to the authorised PDF.

Project No:	EW160259	Date of Issue:	22/02/2016
Customer:	GEOLYSE	Report No:	1
Address:	PO Box 1963 ORANGE NSW 2800	Date Received:	5/02/2016
Phone:	418607830	Matrix:	Soil
Fax:		Location:	Blackjack/Quia Rd
Email:	bstuart@geolyse.com	Sampler ID:	AD/PS
		Date of Sampling:	4/02/2016
		Sample Condition:	Acceptable

				Client Sample ID:	S1	S2	S3	S4	S5	S7	S8	S9	S10	S11	S13	S15	S16	S17	S18	S19
				Source/Depth:	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm
Test Parameter	Method Description	Method Refere	Units	LOR	160259-1	160259-2	160259-3	160259-4	160259-5	160259-7	160259-8	160259-9	160259-10	160259-11	160259-13	160259-15	160259-16	160259-17	160259-18	160259-19
Field Texture	Physical	CSIRO 2009	-	na	LC	LC	FSL	LMC	FSCL	LS	FSCL	LS	FSCL	CL	LC	LS	SC	LC	LMC	SC
Field Colour	Physical	CSIRO 2009	-	na	Brown	Red mottle brown	Brown	Brown	Brown	Black	Brown	Black	Brown	Brown	Brown	Black	Red/brown	Red/brown	Brown	Light yellow/brown
Plasticity	Physical	CSIRO 2009	Index	na	2/3	2/3	2	3	2	0	2	0	2	2/3	2/3	0	1	2/3	3	1
Grain Size	Physical	CSIRO 2009	Class	na	-	-	v. fine	-	v. fine	med grain	v. fine	med grain	v. fine	-	-	med grain	med grain	-	-	med grain
Roots Present	Presence/Absence	-	Y/N	na	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fill Present	Presence/Absence	-	*/N	na	N	N	N	N	N	*	N	*	N	N	N	*	*	N	N	*
Comments / physical contaminants present				na	-	-	-	-	-	charcoal	-	charcoal	-	-	-	charcoal	charcoal, rock and brick	-	-	gravel, black chunks of charcoal

* indicates fill may be present

Analysis Report Soil

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Project No:	EW160259	Date of Issue:	22/02/2016
Customer:	GEOLYSE	Report No:	1
Address:	PO Box 1963 ORANGE NSW 2800	Date Received:	5/02/2016
Phone:	418607830	Matrix:	Soil
Fax:		Location:	Blackjack/Quia Rd
Email:	bstuart@geolyse.com	Sampler ID:	AD/PS
		Date of Sampling:	4/02/2016
		Sample Condition:	Acceptable

				Client Sample ID:	S20	S21	S23	S24	S25	S26	S28	S29	S30	S31	S32	S33	S34	S35	S36	S37
				Source/Depth:	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm
Test Parameter	Method Description	Method Refere	Units	LOR	160259-20	160259-21	160259-23	160259-24	160259-25	160259-26	160259-28	160259-29	160259-30	160259-31	160259-32	160259-33	160259-34	160259-35	160259-36	160259-37
Field Texture	Physical	CSIRO 2009	-	na	LMC	SC	SC	FSCL	LS	SC	FSL	FSCL	FSL	LMC	LMC	LS	LS	LS	LMC	LS
Field Colour	Physical	CSIRO 2009	-	na	Dark brown	Light yellow/brown	Brown	Dark brown	Black	Brown	Red/brown	Red/brown	Brown	Red/brown	Brown	Red/brown	Brown	Brown	Red/brown	Black
Plasticity	Physical	CSIRO 2009	Index	na	2/3	1	1	2	0	1	1	2	1	2/3	2/3	1	1	1	2/3	0
Grain Size	Physical	CSIRO 2009	Class	na	-	med grain	med grain	v. fine	med/large	med/large	fine	fine	fine	-	med grain	med grain	med grain	fine/med	-	med grain
Roots Present	Presence/Absence	-	Y/N	na	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fill Present	Presence/Absence	-	*/N	na	N	*	*	N	*	N	N	N	N	N	N	N	N	N	N	*
Comments / physical contaminants present				na	-	gravel, rock and charcoal	gravel	-	gravel	large gravel	-	-	-	-	gravel	gravel	gravel, charcoal	gravel	gravel	gravel, charcoal

* indicates fill may be present

Analysis Report Soil

PLEASE NOTE: This excel spreadsheet does not constitute an official laboratory analysis report - please refer to the laboratory report for full details.

Project No:

EW160259

Customer:

GEOLYSE

Address:

PO Box 1963 ORANGE NSW 2800

Phone:

418607830

Fax:

Email:

bstuart@geolyse.com

Date of Issue:

22/02/2016

Report No:

1

Date Received:

5/02/2016

Matrix:

Soil

Location:

Blackjack/Quia Rd

Sampler ID:

AD/PS

Date of Sampling:

4/02/2016

Sample Condition:

Acceptable

				Client Sample ID:	S38	S39	S40	S41	S42	S43	S44	S45	S46	S47	S48	S49	S50	S51	S52	S53
				Source/Depth:	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm
Test Parameter	Method Description	Method Refere	Units	LOR	160259-38	160259-39	160259-40	160259-41	160259-42	160259-43	160259-44	160259-45	160259-46	160259-47	160259-48	160259-49	160259-50	160259-51	160259-52	160259-53
Field Texture	Physical	CSIRO 2009	-	na	FSCL	FSL	SC	FSL	FSL	FSL	LS	FSL	FSL	FSL	FSL	CL	LS	FSL	LS	LS
Field Colour	Physical	CSIRO 2009	-	na	Red/brown	Red/brown	Red/orange	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Red/brown	Brown	Black	Light brown	Black	Black
Plasticity	Physical	CSIRO 2009	Index	na	2	1	2	1	1	1	0	0	0	1	1	3	0	1	0	0
Grain Size	Physical	CSIRO 2009	Class	na	fine	fine	med grain	fine	fine	fine	fine	fine	fine	v. fine	v. fine	-	med/coarse	fine/med	fine/med	fine/med
Roots Present	Presence/Absence	-	Y/N	na	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fill Present	Presence/Absence	-	*/N	na	N	N	N	N	N	N	N	N	N	N	N	N	*	N	*	*
Comments / physical contaminants present				na	gravel	-	white gravel	gravel	gravel	-	-	-	-	-	-	-	gravel, charcoal	-	-	gravel, white chunks of ash/board

* indicates fill may be present

Analysis Report Soil

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Project No:	EW160259	Date of Issue:	22/02/2016
Customer:	GEOLYSE	Report No:	1
Address:	PO Box 1963 ORANGE NSW 2800	Date Received:	5/02/2016
Phone:	418607830	Matrix:	Soil
Fax:		Location:	Blackjack/Quia Rd
Email:	bstuart@geolyse.com	Sampler ID:	AD/PS
		Date of Sampling:	4/02/2016
		Sample Condition:	Acceptable

				Client Sample ID:	S54	S55	S56	S57	S58	S59	S60	S61	S64	D1W1	D1W2	D1E1	D1E2	D1S1	D1S2	D1N1	D1N2
				Source/Depth:	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm
Test Parameter	Method Description	Method Refere	Units	LOR	160259-54	160259-55	160259-56	160259-57	160259-58	160259-59	160259-60	160259-61	160259-64	160259-65	160259-66	160259-67	160259-68	160259-69	160259-70	160259-71	160259-72
Field Texture	Physical	CSIRO 2009	-	na	SL	FSCL	FSCL	SL	SL	LMC	FSCL	SL	SL	FSCL	SC	FSL	FSCL	FSCL	FSCL	FSCL	LC
Field Colour	Physical	CSIRO 2009	-	na	Light brown	Brown	Brown	Red/orange	Brown	Brown	Brown	Brown	Brown	Brown	Red/orange	Brown	Brown	Brown	Brown	Brown	Brown
Plasticity	Physical	CSIRO 2009	Index	na	1	2/3	2/3	1	1	3	2/3	1	1	2/3	1	1	2/3	2/3	2/3	2/3	2/3
Grain Size	Physical	CSIRO 2009	Class	na	fine/med	v. fine	v. fine	fine/med	fine/med	-	fine	fine/med	fine/med	fine	fine/med	fine	fine	fine	fine	fine	-
Roots Present	Presence/Absence	-	Y/N	na	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fill Present	Presence/Absence	-	*/N	na	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Comments / physical contaminants present				na	gravel	gravel	-	gravel	-	small gravel	gravel	gravel	gravel	-	gravel	gravel	-	-	gravel, possible brick pieces	-	gravel

* indicates fill may be present

Analysis Report Soil

PLEASE NOTE: This excel spreadsheet does not constitute an official laboratory analysis report - please

Project No:	EW160259	Date of Issue:	22/02/2016
Customer:	GEOLYSE	Report No:	1
Address:	PO Box 1963 ORANGE NSW 2800	Date Received:	5/02/2016
Phone:	418607830	Matrix:	Soil
Fax:		Location:	Blackjack/Quia Rd
Email:	bstuart@geolyse.com	Sampler ID:	AD/PS
		Date of Sampling:	4/02/2016
		Sample Condition:	Acceptable

				Client Sample ID:	D2S1	D2W2	D3N1	D3N2	D3E1	D3E2	D3S1	D3S2	D3W1	D3W2	S16b	S64b
				Source/Depth:	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm	0-20cm
Test Parameter	Method Description	Method Refere	Units	LOR	160259-74	160259-75	160259-76	160259-77	160259-78	160259-79	160259-80	160259-81	160259-82	160259-83	160259-84	160259-85
Field Texture	Physical	CSIRO 2009	-	na	LMC	LS	SL	LS	LS	SC	SL	LS	SL	LS	LC	FSL
Field Colour	Physical	CSIRO 2009	-	na	Light brown	Black	Brown	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Plasticity	Physical	CSIRO 2009	Index	na	3	0	1	0	0	1	1	0	0	0	2/3	1
Grain Size	Physical	CSIRO 2009	Class	na	-	fine/med	fine/med	fine/med	fine/med	fine/med	fine/med	fine/med	fine/med	fine/med	-	fine
Roots Present	Presence/Absence	-	Y/N	na	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fill Present	Presence/Absence	-	*/N	na	N	*	N	*	*	N	N	*	N	N	N	N
Comments / physical contaminants present				na	gravel, charcoal	gravel, charcoal	gravel, white chunks of board	med to large gravel, white chunks	med gravel	gravel, charcoal	charcoal, white chunks of board/ash	charcoal, gravel	charcoal, gravel	gravel	-	gravel

* indicates fill may be present

Appendix B

ANALYTICAL LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Work Order	: ES1602850	Page	: 1 of 83
Client	: GEOLYSE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR BRENDAN STUART	Contact	:
Address	: PO BOX 1963 ORANGE NSW, AUSTRALIA 2800	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: bstuart@geolyse.com	E-mail	:
Telephone	: +61 02 6393 5000	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 6393 5050	Facsimile	: +61-2-8784 8500
Project	: 214358	QC Level	: NEPM 2013 B3 & ALS QC Standard
Order number	: ----	Date Samples Received	: 09-Feb-2016 09:00
C-O-C number	: ----	Date Analysis Commenced	: 10-Feb-2016
Sampler	: ----	Issue Date	: 15-Feb-2016 17:05
Site	: ----		
Quote number	: ----	No. of samples received	: 77
		No. of samples analysed	: 77

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results



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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Pabi Subba	Senior Organic Chemist	Sydney Inorganics, Smithfield, NSW
Pabi Subba	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Shaun Spooner	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

Ø = ALS is not NATA accredited for these tests.

- EP068: Positive results have been confirmed by re-extraction and re-analysis.
- EP068: Particular samples required dilution due to sample matrix interferences. LOR values have been adjusted accordingly.
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly and NATA accreditation does not apply to analysis on these samples.**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.
- 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), Dibenzo(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.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH1	CH2	CH3	CH4	CH5
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-001	ES1602850-002	ES1602850-003	ES1602850-004	ES1602850-005
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		10.1	9.4	11.5	11.0	8.9
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Sample weight (dry)	----	0.01	g		33.6	26.8	30.5	37.5	36.9
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER
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		38	46	36	45	23
Copper	7440-50-8	5	mg/kg		13	14	14	15	20
Lead	7439-92-1	5	mg/kg		21	17	30	16	10
Nickel	7440-02-0	2	mg/kg		15	14	12	18	14
Zinc	7440-66-6	5	mg/kg		67	64	51	44	37
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		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH1	CH2	CH3	CH4	CH5
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-001	ES1602850-002	ES1602850-003	ES1602850-004	ES1602850-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH1	CH2	CH3	CH4	CH5
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-001	ES1602850-002	ES1602850-003	ES1602850-004	ES1602850-005
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
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
Benzo(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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH1	CH2	CH3	CH4	CH5
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-001	ES1602850-002	ES1602850-003	ES1602850-004	ES1602850-005
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
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
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	----	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	%		106	109	107	108	107
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		114	84.3	122	104	108
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		93.5	64.1	99.4	73.3	88.2
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		89.7	85.8	86.0	104	87.5
2-Chlorophenol-D4	93951-73-6	0.5	%		92.8	88.8	88.5	107	90.2
2,4,6-Tribromophenol	118-79-6	0.5	%		88.7	86.3	90.4	107	89.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		109	105	104	125	105



Analytical Results

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

Client sample ID

				CH1	CH2	CH3	CH4	CH5
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-001	ES1602850-002	ES1602850-003	ES1602850-004	ES1602850-005
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	113	108	110	120	109
4-Terphenyl-d14	1718-51-0	0.5	%	100	96.6	96.3	116	96.2
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	94.3	101	96.5	93.0	95.3
Toluene-D8	2037-26-5	0.2	%	101	108	101	99.0	103
4-Bromofluorobenzene	460-00-4	0.2	%	101	104	97.4	98.8	102



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH7	CH8	CH9	CH10	CH11
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-006	ES1602850-007	ES1602850-008	ES1602850-009	ES1602850-010
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		6.1	9.4	26.7	9.8	11.6
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Sample weight (dry)	----	0.01	g		24.0	25.0	11.0	34.6	22.4
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	9	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		26	32	25	23	43
Copper	7440-50-8	5	mg/kg		22	22	107	25	22
Lead	7439-92-1	5	mg/kg		16	16	72	16	12
Nickel	7440-02-0	2	mg/kg		15	14	27	18	60
Zinc	7440-66-6	5	mg/kg		360	63	825	103	112
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		----	----	----	----	----
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	<0.25	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		0.07	<0.05	<0.25	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		0.07	<0.05	<0.25	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		0.09	<0.05	1.27	0.06	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.25	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH7	CH8	CH9	CH10	CH11
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-006	ES1602850-007	ES1602850-008	ES1602850-009	ES1602850-010
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<1.0	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<1.0	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	0.09	<0.05	1.27	0.06	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<1.0	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<1.0	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<1.0	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.25	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH7	CH8	CH9	CH10	CH11
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-006	ES1602850-007	ES1602850-008	ES1602850-009	ES1602850-010
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	30.0	<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	57.3	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	33.7	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	1.7	<0.5	521	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	177	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	7.2	<0.5	1050	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	7.1	<0.5	951	<0.5	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg	2.7	<0.5	426	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	2.7	<0.5	390	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	3.7	<0.5	379	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	1.4	<0.5	141	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.1	<0.5	308	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	1.2	<0.5	90.2	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	23.3	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.4	<0.5	115	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	31.2	<0.5	4690	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	3.0	<0.5	440	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	3.3	0.6	440	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	3.5	1.2	440	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	150	<50	<50



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH7	CH8	CH9	CH10	CH11
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-006	ES1602850-007	ES1602850-008	ES1602850-009	ES1602850-010
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		190	<100	7750	<100	<100
C29 - C36 Fraction	----	100	mg/kg		120	<100	3670	<100	140
^ C10 - C36 Fraction (sum)	----	50	mg/kg		310	<50	11600	<50	140
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	----	50	mg/kg		<50	<50	280	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		260	<100	10300	<100	140
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	2050	<100	130
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		260	<50	12600	<50	270
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	280	<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	%		104	101	60.0	93.0	113
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		122	109	128	87.3	102
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		98.7	81.3	80.4	66.2	88.7
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		77.9	86.8	91.9	89.6	93.6
2-Chlorophenol-D4	93951-73-6	0.5	%		75.6	90.6	94.7	92.6	97.0
2,4,6-Tribromophenol	118-79-6	0.5	%		65.6	90.4	97.8	96.2	97.0
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		108	104	112	104	110



Analytical Results

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

Client sample ID

				CH7	CH8	CH9	CH10	CH11
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-006	ES1602850-007	ES1602850-008	ES1602850-009	ES1602850-010
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	106	108	107	112	115
4-Terphenyl-d14	1718-51-0	0.5	%	95.6	95.9	116	98.2	102
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	104	97.8	89.6	89.0	73.1
Toluene-D8	2037-26-5	0.2	%	108	106	91.5	106	112
4-Bromofluorobenzene	460-00-4	0.2	%	98.6	102	87.7	107	98.6



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH15	CH16	CH16B	CH17	CH18
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-011	ES1602850-012	ES1602850-013	ES1602850-014	ES1602850-015
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		25.0	9.2	10.4	16.0	17.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Sample weight (dry)	----	0.01	g		15.9	45.1	42.9	36.6	24.5
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		15	8	<5	6	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		18	32	26	40	34
Copper	7440-50-8	5	mg/kg		18	15	21	15	18
Lead	7439-92-1	5	mg/kg		28	13	12	17	18
Nickel	7440-02-0	2	mg/kg		9	23	16	21	20
Zinc	7440-66-6	5	mg/kg		395	53	135	38	74
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	0.4
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH15	CH16	CH16B	CH17	CH18
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-011	ES1602850-012	ES1602850-013	ES1602850-014	ES1602850-015
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH15	CH16	CH16B	CH17	CH18
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-011	ES1602850-012	ES1602850-013	ES1602850-014	ES1602850-015
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
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	0.7	<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	0.6	<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	2.7	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	4.8	<0.5	<0.5	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.0	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	2.2	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3.3	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	1.0	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3.4	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.4	<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	1.8	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	23.9	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	4.2	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	4.5	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	4.7	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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH15	CH16	CH16B	CH17	CH18
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-011	ES1602850-012	ES1602850-013	ES1602850-014	ES1602850-015
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		220	160	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		120	180	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		340	340	<50	<50	<50
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	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		320	300	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	190	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		320	490	<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	%		108	80.0	106	114	117
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		121	114	109	108	99.5
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		109	110	89.7	64.5	74.0
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		86.8	88.5	83.1	90.7	82.9
2-Chlorophenol-D4	93951-73-6	0.5	%		89.6	90.8	85.5	93.7	85.5
2,4,6-Tribromophenol	118-79-6	0.5	%		92.3	93.8	85.7	90.6	83.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		105	105	98.3	108	99.5



Analytical Results

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

Client sample ID

				CH15	CH16	CH16B	CH17	CH18
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-011	ES1602850-012	ES1602850-013	ES1602850-014	ES1602850-015
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	109	111	104	114	104
4-Terphenyl-d14	1718-51-0	0.5	%	95.2	97.2	90.3	100	91.3
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	76.2	91.7	77.5	101	84.5
Toluene-D8	2037-26-5	0.2	%	107	104	103	104	89.3
4-Bromofluorobenzene	460-00-4	0.2	%	102	100	94.8	101	107



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH19	CH20	CH21	CH23	CH24
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-016	ES1602850-017	ES1602850-018	ES1602850-019	ES1602850-020
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		9.7	16.8	10.4	9.7	11.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Sample weight (dry)	----	0.01	g		38.1	21.6	27.0	34.3	32.7
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		15	<5	12	<5	5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		5	36	3	40	58
Copper	7440-50-8	5	mg/kg		10	19	7	18	16
Lead	7439-92-1	5	mg/kg		15	13	15	11	22
Nickel	7440-02-0	2	mg/kg		16	18	11	17	16
Zinc	7440-66-6	5	mg/kg		51	171	38	106	604
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		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH19	CH20	CH21	CH23	CH24
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-016	ES1602850-017	ES1602850-018	ES1602850-019	ES1602850-020
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH19	CH20	CH21	CH23	CH24
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-016	ES1602850-017	ES1602850-018	ES1602850-019	ES1602850-020
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
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
Benzo(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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH19	CH20	CH21	CH23	CH24
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-016	ES1602850-017	ES1602850-018	ES1602850-019	ES1602850-020
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
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
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	----	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	100	<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	%		113	83.0	98.0	105	99.0
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		102	109	99.6	98.9	94.1
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		64.5	93.7	68.5	77.6	73.4
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		87.5	86.5	84.8	90.6	88.6
2-Chlorophenol-D4	93951-73-6	0.5	%		89.8	89.3	86.9	93.4	91.6
2,4,6-Tribromophenol	118-79-6	0.5	%		88.5	88.7	73.1	94.0	87.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		104	107	101	108	105



Analytical Results

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

Client sample ID

				CH19	CH20	CH21	CH23	CH24
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-016	ES1602850-017	ES1602850-018	ES1602850-019	ES1602850-020
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	111	110	107	113	109
4-Terphenyl-d14	1718-51-0	0.5	%	97.7	99.0	94.8	100	97.9
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	86.3	107	84.8	96.5	92.4
Toluene-D8	2037-26-5	0.2	%	100	111	87.0	116	99.5
4-Bromofluorobenzene	460-00-4	0.2	%	111	105	73.4	108	93.9



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH25	CH26	CH28	CH29	CH30
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-021	ES1602850-022	ES1602850-024	ES1602850-025	ES1602850-026
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		11.4	12.2	7.2	9.5	12.3
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Sample weight (dry)	----	0.01	g		25.0	26.8	21.3	25.7	16.0
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER	S.SPOONER
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		17	6	<5	6	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		12	11	36	30	43
Copper	7440-50-8	5	mg/kg		29	19	12	14	18
Lead	7439-92-1	5	mg/kg		28	15	13	14	13
Nickel	7440-02-0	2	mg/kg		11	17	14	21	21
Zinc	7440-66-6	5	mg/kg		194	82	40	31	54
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		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		<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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH25	CH26	CH28	CH29	CH30
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-021	ES1602850-022	ES1602850-024	ES1602850-025	ES1602850-026
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH25	CH26	CH28	CH29	CH30
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-021	ES1602850-022	ES1602850-024	ES1602850-025	ES1602850-026
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	0.7	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	0.7	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH25	CH26	CH28	CH29	CH30
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-021	ES1602850-022	ES1602850-024	ES1602850-025	ES1602850-026
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		190	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		140	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		330	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		280	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		280	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		61.0	84.0	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		124	92.5	86.8	98.6	103
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		98.2	69.7	65.4	64.9	82.7
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		111	120	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		93.2	106	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		118	122	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		100	94.8	----	----	----



Analytical Results

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

Client sample ID

				CH25	CH26	CH28	CH29	CH30
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-021	ES1602850-022	ES1602850-024	ES1602850-025	ES1602850-026
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	107	109	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	108	104	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	92.3	102	----	----	----
Toluene-D8	2037-26-5	0.2	%	97.4	103	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	95.6	109	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH31	CH32	CH33	CH34	CH35
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-027	ES1602850-028	ES1602850-029	ES1602850-030	ES1602850-031
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		13.0	7.1	4.0	4.6	6.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	----	----
Asbestos Type	1332-21-4	-	--		-	-	-	----	----
Sample weight (dry)	----	0.01	g		29.8	28.6	23.0	----	----
APPROVED IDENTIFIER:	----	-	--		S.SPOONER	S.SPOONER	S.SPOONER	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	7	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		72	58	29	41	34
Copper	7440-50-8	5	mg/kg		16	16	11	10	15
Lead	7439-92-1	5	mg/kg		15	20	25	10	12
Nickel	7440-02-0	2	mg/kg		28	26	12	9	13
Zinc	7440-66-6	5	mg/kg		58	59	94	56	90
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		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH31	CH32	CH33	CH34	CH35
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-027	ES1602850-028	ES1602850-029	ES1602850-030	ES1602850-031
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH31	CH32	CH33	CH34	CH35
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-027	ES1602850-028	ES1602850-029	ES1602850-030	ES1602850-031
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH31	CH32	CH33	CH34	CH35
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-027	ES1602850-028	ES1602850-029	ES1602850-030	ES1602850-031
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		105	104	88.1	71.3	95.4
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		75.2	80.3	54.3	104	79.8
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH31	CH32	CH33	CH34	CH35
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-027	ES1602850-028	ES1602850-029	ES1602850-030	ES1602850-031
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH36	CH37	CH38	CH39	CH40
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-032	ES1602850-033	ES1602850-034	ES1602850-035	ES1602850-036
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		4.0	7.4	3.7	6.1	6.6
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
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		28	24	62	62	14
Copper	7440-50-8	5	mg/kg		15	11	10	11	<5
Lead	7439-92-1	5	mg/kg		14	8	11	18	36
Nickel	7440-02-0	2	mg/kg		20	9	18	19	4
Zinc	7440-66-6	5	mg/kg		28	50	41	83	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		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH36	CH37	CH38	CH39	CH40
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-032	ES1602850-033	ES1602850-034	ES1602850-035	ES1602850-036
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH36	CH37	CH38	CH39	CH40
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-032	ES1602850-033	ES1602850-034	ES1602850-035	ES1602850-036
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH36	CH37	CH38	CH39	CH40
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-032	ES1602850-033	ES1602850-034	ES1602850-035	ES1602850-036
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		104	108	85.5	127	108
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		61.5	89.4	66.6	93.8	70.4
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH36	CH37	CH38	CH39	CH40
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-032	ES1602850-033	ES1602850-034	ES1602850-035	ES1602850-036
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH41	CH42	CH43	CH44	CH45
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-037	ES1602850-038	ES1602850-039	ES1602850-040	ES1602850-041
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		5.8	8.0	7.1	5.2	8.9
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
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		46	26	28	28	51
Copper	7440-50-8	5	mg/kg		10	24	13	7	16
Lead	7439-92-1	5	mg/kg		9	16	10	7	14
Nickel	7440-02-0	2	mg/kg		11	16	11	7	16
Zinc	7440-66-6	5	mg/kg		64	127	64	23	97
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		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH41	CH42	CH43	CH44	CH45
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-037	ES1602850-038	ES1602850-039	ES1602850-040	ES1602850-041
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH41	CH42	CH43	CH44	CH45
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-037	ES1602850-038	ES1602850-039	ES1602850-040	ES1602850-041
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH41	CH42	CH43	CH44	CH45
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-037	ES1602850-038	ES1602850-039	ES1602850-040	ES1602850-041
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		109	113	124	116	105
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		71.9	76.0	69.3	70.8	65.3
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH41	CH42	CH43	CH44	CH45
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-037	ES1602850-038	ES1602850-039	ES1602850-040	ES1602850-041
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH46	CH47	CH48	CH49	CH50
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-042	ES1602850-043	ES1602850-044	ES1602850-045	ES1602850-046
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		16.6	10.0	5.6	8.1	45.6
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	<5	<5	7	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		24	35	52	30	40
Copper	7440-50-8	5	mg/kg		102	29	11	21	398
Lead	7439-92-1	5	mg/kg		26	13	11	11	40
Nickel	7440-02-0	2	mg/kg		14	10	17	20	15
Zinc	7440-66-6	5	mg/kg		358	131	66	80	334
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	0.3
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH46	CH47	CH48	CH49	CH50
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-042	ES1602850-043	ES1602850-044	ES1602850-045	ES1602850-046
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH46	CH47	CH48	CH49	CH50
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-042	ES1602850-043	ES1602850-044	ES1602850-045	ES1602850-046
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH46	CH47	CH48	CH49	CH50
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-042	ES1602850-043	ES1602850-044	ES1602850-045	ES1602850-046
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		111	99.9	112	94.8	73.2
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		66.5	63.0	61.1	68.7	65.1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH46	CH47	CH48	CH49	CH50
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-042	ES1602850-043	ES1602850-044	ES1602850-045	ES1602850-046
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH51	CH52	CH53	CH54	CH55
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-047	ES1602850-048	ES1602850-049	ES1602850-050	ES1602850-051
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		18.4	30.7	19.8	10.5	8.1
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	<5	6	7	5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	1
Chromium	7440-47-3	2	mg/kg		38	26	26	56	80
Copper	7440-50-8	5	mg/kg		105	307	99	26	13
Lead	7439-92-1	5	mg/kg		17	26	16	15	12
Nickel	7440-02-0	2	mg/kg		14	16	28	10	22
Zinc	7440-66-6	5	mg/kg		301	562	266	78	31
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	0.2	0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH51	CH52	CH53	CH54	CH55
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-047	ES1602850-048	ES1602850-049	ES1602850-050	ES1602850-051
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH51	CH52	CH53	CH54	CH55
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-047	ES1602850-048	ES1602850-049	ES1602850-050	ES1602850-051
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2-Methylphenol	95-48-7	0.5	mg/kg		----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH51	CH52	CH53	CH54	CH55
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-047	ES1602850-048	ES1602850-049	ES1602850-050	ES1602850-051
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		116	75.8	89.9	104	128
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		62.2	76.3	60.9	73.2	66.6
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH51	CH52	CH53	CH54	CH55
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-047	ES1602850-048	ES1602850-049	ES1602850-050	ES1602850-051
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH56	CH57	CH58	CH59	CH60
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-052	ES1602850-053	ES1602850-054	ES1602850-055	ES1602850-056
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		11.9	4.1	5.6	11.2	9.5
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		11	<5	<5	6	6
Cadmium	7440-43-9	1	mg/kg		<1	1	<1	1	1
Chromium	7440-47-3	2	mg/kg		29	28	30	51	50
Copper	7440-50-8	5	mg/kg		24	<5	9	14	14
Lead	7439-92-1	5	mg/kg		16	22	9	18	17
Nickel	7440-02-0	2	mg/kg		39	6	14	32	36
Zinc	7440-66-6	5	mg/kg		78	85	26	48	68
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		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH56	CH57	CH58	CH59	CH60
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-052	ES1602850-053	ES1602850-054	ES1602850-055	ES1602850-056
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH56	CH57	CH58	CH59	CH60
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-052	ES1602850-053	ES1602850-054	ES1602850-055	ES1602850-056
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH56	CH57	CH58	CH59	CH60
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-052	ES1602850-053	ES1602850-054	ES1602850-055	ES1602850-056
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		123	118	115	126	89.2
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		79.5	68.6	69.0	74.7	76.1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH56	CH57	CH58	CH59	CH60
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-052	ES1602850-053	ES1602850-054	ES1602850-055	ES1602850-056
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH61	CH64	CH64B	CH65	CH66
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-057	ES1602850-058	ES1602850-059	ES1602850-060	ES1602850-061
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		8.6	5.5	5.9	12.2	6.7
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	No	----
Asbestos Type	1332-21-4	-	--		----	----	----	-	----
Sample weight (dry)	----	0.01	g		----	----	----	24.4	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	S.SPOONER	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	10	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	1	<1	----	----
Chromium	7440-47-3	2	mg/kg		35	32	48	----	----
Copper	7440-50-8	5	mg/kg		10	8	8	----	----
Lead	7439-92-1	5	mg/kg		11	18	9	----	----
Nickel	7440-02-0	2	mg/kg		16	16	11	----	----
Zinc	7440-66-6	5	mg/kg		22	45	14	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH61	CH64	CH64B	CH65	CH66
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-057	ES1602850-058	ES1602850-059	ES1602850-060	ES1602850-061
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH61	CH64	CH64B	CH65	CH66
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-057	ES1602850-058	ES1602850-059	ES1602850-060	ES1602850-061
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH61	CH64	CH64B	CH65	CH66
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-057	ES1602850-058	ES1602850-059	ES1602850-060	ES1602850-061
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		89.0	84.7	82.6	94.0	84.2
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		71.1	65.6	68.5	81.3	67.4
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH61	CH64	CH64B	CH65	CH66
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-057	ES1602850-058	ES1602850-059	ES1602850-060	ES1602850-061
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH67	CH68	CH69	CH70	CH71
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-062	ES1602850-063	ES1602850-064	ES1602850-065	ES1602850-066
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		11.0	10.8	11.2	10.3	14.9
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		----	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		----	----	----	----	----
Chromium	7440-47-3	2	mg/kg		----	----	----	----	----
Copper	7440-50-8	5	mg/kg		----	----	----	----	----
Lead	7439-92-1	5	mg/kg		----	----	----	----	----
Nickel	7440-02-0	2	mg/kg		----	----	----	----	----
Zinc	7440-66-6	5	mg/kg		----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		----	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH67	CH68	CH69	CH70	CH71
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-062	ES1602850-063	ES1602850-064	ES1602850-065	ES1602850-066
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH67	CH68	CH69	CH70	CH71
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-062	ES1602850-063	ES1602850-064	ES1602850-065	ES1602850-066
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2-Methylphenol	95-48-7	0.5	mg/kg		----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH67	CH68	CH69	CH70	CH71
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-062	ES1602850-063	ES1602850-064	ES1602850-065	ES1602850-066
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		112	84.9	90.0	87.5	94.1
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		72.7	64.1	67.6	70.4	73.7
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH67	CH68	CH69	CH70	CH71
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-062	ES1602850-063	ES1602850-064	ES1602850-065	ES1602850-066
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH72	CH74	CH75	CH76	CH77
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-067	ES1602850-068	ES1602850-069	ES1602850-070	ES1602850-071
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		14.2	9.5	3.6	11.1	10.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	No	----	No	----
Asbestos Type	1332-21-4	-	--		----	-	----	-	----
Sample weight (dry)	----	0.01	g		----	44.1	----	56.7	----
APPROVED IDENTIFIER:	----	-	--		----	S.SPOONER	----	S.SPOONER	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		----	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg		----	<1	2	----	----
Chromium	7440-47-3	2	mg/kg		----	32	20	----	----
Copper	7440-50-8	5	mg/kg		----	36	79	----	----
Lead	7439-92-1	5	mg/kg		----	14	42	----	----
Nickel	7440-02-0	2	mg/kg		----	19	20	----	----
Zinc	7440-66-6	5	mg/kg		----	137	347	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		----	<0.1	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH72	CH74	CH75	CH76	CH77
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-067	ES1602850-068	ES1602850-069	ES1602850-070	ES1602850-071
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<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
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH72	CH74	CH75	CH76	CH77
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-067	ES1602850-068	ES1602850-069	ES1602850-070	ES1602850-071
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	<0.5	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.2	1.2	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	----	<50	<50	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH72	CH74	CH75	CH76	CH77
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-067	ES1602850-068	ES1602850-069	ES1602850-070	ES1602850-071
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	<100	350	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	260	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	<50	610	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	580	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	<100	130	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	<50	710	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		----	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	<0.2	<0.2	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		----	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		94.7	----	----	92.7	87.2
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		77.0	----	----	77.2	72.2
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	122	118	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	106	99.6	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	117	113	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	96.7	100	----	----



Analytical Results

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

Client sample ID

				CH72	CH74	CH75	CH76	CH77
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-067	ES1602850-068	ES1602850-069	ES1602850-070	ES1602850-071
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	110	102	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	104	98.4	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	84.8	89.3	----	----
Toluene-D8	2037-26-5	0.2	%	----	88.6	108	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	91.9	102	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH78	CH79	CH80	CH81	CH82
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-072	ES1602850-073	ES1602850-074	ES1602850-075	ES1602850-076
					Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%		7.7	11.5	14.1	11.4	3.1
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	----	----
Asbestos Type	1332-21-4	-	--		----	----	----	----	----
Sample weight (dry)	----	0.01	g		----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		----	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		----	----	----	----	----
Chromium	7440-47-3	2	mg/kg		----	----	----	----	----
Copper	7440-50-8	5	mg/kg		----	----	----	----	----
Lead	7439-92-1	5	mg/kg		----	----	----	----	----
Nickel	7440-02-0	2	mg/kg		----	----	----	----	----
Zinc	7440-66-6	5	mg/kg		----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		----	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	----
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		0.72	1.46	<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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH78	CH79	CH80	CH81	CH82
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-072	ES1602850-073	ES1602850-074	ES1602850-075	ES1602850-076
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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	0.72	1.46	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH78	CH79	CH80	CH81	CH82
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-072	ES1602850-073	ES1602850-074	ES1602850-075	ES1602850-076
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----
Benzo(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH78	CH79	CH80	CH81	CH82
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit		ES1602850-072	ES1602850-073	ES1602850-074	ES1602850-075	ES1602850-076
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		117	95.0	87.9	101	84.4
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		102	70.3	61.0	80.6	65.7
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----



Analytical Results

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

Client sample ID

				CH78	CH79	CH80	CH81	CH82
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]	[04-Feb-2016]
Compound	CAS Number	LOR	Unit	ES1602850-072	ES1602850-073	ES1602850-074	ES1602850-075	ES1602850-076
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH83	CH13	----	----	----
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	----	----	----
Compound	CAS Number	LOR	Unit	ES1602850-077	ES1602850-078	-----	-----	-----	-----
				Result	Result	Result	Result	Result	Result
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1	%	10.0	11.0	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	----	-	----	----	----	----
Sample weight (dry)	----	0.01	g	----	25.2	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	S.SPOONER	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	----	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	----	1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	----	55	----	----	----	----
Copper	7440-50-8	5	mg/kg	----	21	----	----	----	----
Lead	7439-92-1	5	mg/kg	----	21	----	----	----	----
Nickel	7440-02-0	2	mg/kg	----	20	----	----	----	----
Zinc	7440-66-6	5	mg/kg	----	90	----	----	----	----
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	----	----	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH83	CH13	----	----	----
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	----	----	----
Compound	CAS Number	LOR	Unit		ES1602850-077	ES1602850-078	-----	-----	-----
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		----	<0.5	----	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Client sample ID

				CH83	CH13	----	----	----
Client sampling date / time				[04-Feb-2016]	[04-Feb-2016]	----	----	----
Compound	CAS Number	LOR	Unit	ES1602850-077	ES1602850-078	-----	-----	-----
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	----	----
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	----	----	----
Benzo(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	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH83	CH13	----	----	----
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	----	----	----
Compound	CAS Number	LOR	Unit		ES1602850-077	ES1602850-078	-----	-----	-----
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C15 - C28 Fraction	----	100	mg/kg		----	550	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	520	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	1070	----	----	----
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	----	50	mg/kg		----	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	970	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	160	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	1130	----	----	----
^ >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	%		----	115	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		88.3	78.0	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		72.4	114	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	90.6	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	80.3	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		----	82.2	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	81.6	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	CH83	CH13	----	----	----
Client sampling date / time					[04-Feb-2016]	[04-Feb-2016]	----	----	----
Compound	CAS Number	LOR	Unit		ES1602850-077	ES1602850-078	-----	-----	-----
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued									
Anthracene-d10	1719-06-8	0.5	%		----	104	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	90.1	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		----	87.5	----	----	----
Toluene-D8	2037-26-5	0.2	%		----	119	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	129	----	----	----



Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	CH1 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH2 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH3 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH4 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH5 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH7 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH8 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH9 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH10 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH11 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH15 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH16 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH16B - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH17 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH18 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH19 - [04-Feb-2016]	Pale brown clay soil with grey rocks.
EA200: Description	CH20 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH21 - [04-Feb-2016]	Pale brown clay soil with grey rocks.
EA200: Description	CH23 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH24 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH25 - [04-Feb-2016]	Dark grey - brown soil with slag debris.
EA200: Description	CH26 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH28 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH29 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH30 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH31 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH32 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH33 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH65 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH74 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH76 - [04-Feb-2016]	Mid brown clay soil with grey rocks.
EA200: Description	CH13 - [04-Feb-2016]	Mid brown clay soil with grey rocks.



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CERTIFICATE OF ANALYSIS

141303

Client:

East West Enviroag Pty Ltd
82 Plain St
Tamworth
NSW 2340

Attention: Stephanie Cameron

Sample log in details:

Your Reference:	EW160259
No. of samples:	7 Soils
Date samples received / completed instructions received	09/02/16 / 09/02/16

Analysis Details:

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

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

Report Details:

Date results requested by: / Issue Date:	17/02/16 / 17/02/16
Date of Preliminary Report:	Not Issued

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

Results Approved By:


Jacinta Hurst
Laboratory Manager

Envirolab Reference: 141303
Revision No: R 00



vTRH(C6-C10)/BTEXN in Soil				
Our Reference:	UNITS	141303-1	141303-2	141303-6
Your Reference	-----	160259-11	160259-21	160259-1
	-			
Depth	-----	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	04/02/2016
Type of sample		Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	12/02/2016
TRHC ₆ - C ₉	mg/kg	<25	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25	<25
vTPHC ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	90	90	93

svTRH (C10-C40) in Soil				
Our Reference:	UNITS	141303-1	141303-2	141303-6
Your Reference	-----	160259-11	160259-21	160259-1
	-			
Depth	-----	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	04/02/2016
Type of sample		Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	13/02/2016	13/02/2016	13/02/2016
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	83	83	80

PAHs in Soil Our Reference: Your Reference	UNITS ----- -	141303-1 160259-11	141303-2 160259-21	141303-6 160259-1
Depth	-----	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	04/02/2016
Type of sample		Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	13/02/2016	13/02/2016	13/02/2016
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.2
Pyrene	mg/kg	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	NIL (+)VE	0.95
Surrogate p-Terphenyl-d14	%	99	101	100

Organochlorine Pesticides in soil	UNITS	141303-1	141303-2	141303-3	141303-4	141303-5
Our Reference:	-----	160259-11	160259-21	160259-31	160259-41	160259-51
Your Reference	-					
Depth	-----	0-20	0-20	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	13/02/2016
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	77	76	75	77	78

Organochlorine Pesticides in soil			
Our Reference:	UNITS	141303-6	141303-7
Your Reference	-----	160259-1	160259-61
	-		
Depth	-----	0-20	0-20
Date Sampled		04/02/2016	04/02/2016
Type of sample		Soil	Soil
Date extracted	-	12/02/2016	12/02/2016
Date analysed	-	13/02/2016	13/02/2016
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	74	78

Organophosphorus Pesticides						
Our Reference:	UNITS	141303-1	141303-2	141303-3	141303-4	141303-5
Your Reference	-----	160259-11	160259-21	160259-31	160259-41	160259-51
	-					
Depth	-----	0-20	0-20	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	13/02/2016
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	77	76	75	77	78

Organophosphorus Pesticides			
Our Reference:	UNITS	141303-6	141303-7
Your Reference	-----	160259-1	160259-61
	-		
Depth	-----	0-20	0-20
Date Sampled		04/02/2016	04/02/2016
Type of sample		Soil	Soil
Date extracted	-	12/02/2016	12/02/2016
Date analysed	-	13/02/2016	13/02/2016
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Surrogate TCMX	%	74	78

PCBs in Soil				
Our Reference:	UNITS	141303-1	141303-2	141303-6
Your Reference	-----	160259-11	160259-21	160259-1
	-			
Depth	-----	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	04/02/2016
Type of sample		Soil	Soil	Soil
Date extracted	-	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	13/02/2016
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	77	76	74

Acid Extractable metals in soil						
Our Reference:	UNITS	141303-1	141303-2	141303-3	141303-4	141303-5
Your Reference	-----	160259-11	160259-21	160259-31	160259-41	160259-51
	-					
Depth	-----	0-20	0-20	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	4/02/2016	4/02/2016	4/02/2016
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	12/02/2016
Arsenic	mg/kg	<4	6	5	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	40	3	54	43	33
Copper	mg/kg	18	6	13	9	81
Lead	mg/kg	12	12	15	10	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	50	9	26	10	13
Zinc	mg/kg	85	37	28	37	300

Acid Extractable metals in soil			
Our Reference:	UNITS	141303-6	141303-7
Your Reference	-----	160259-1	160259-61
	-		
Depth	-----	0-20	0-20
Date Sampled		04/02/2016	04/02/2016
Type of sample		Soil	Soil
Date prepared	-	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	41	28
Copper	mg/kg	11	9
Lead	mg/kg	20	11
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	13	15
Zinc	mg/kg	67	22

Misc Soil - Inorg				
Our Reference:	UNITS	141303-1	141303-2	141303-6
Your Reference	-----	160259-11	160259-21	160259-1
	-			
Depth	-----	0-20	0-20	0-20
Date Sampled		4/02/2016	4/02/2016	04/02/2016
Type of sample		Soil	Soil	Soil
Date prepared	-	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	12/02/2016	12/02/2016	12/02/2016
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture Our Reference: Your Reference	UNITS ----- -	141303-1 160259-11	141303-2 160259-21	141303-3 160259-31	141303-4 160259-41	141303-5 160259-51
Depth Date Sampled Type of sample	----- ----- -----	0-20 4/02/2016 Soil	0-20 4/02/2016 Soil	0-20 4/02/2016 Soil	0-20 4/02/2016 Soil	0-20 4/02/2016 Soil
Date prepared	-	12/02/2016	12/02/2016	12/02/2016	12/02/2016	12/02/2016
Date analysed	-	15/02/2016	15/02/2016	15/02/2016	15/02/2016	15/02/2016
Moisture	%	12	10	13	3.9	17

Moisture Our Reference: Your Reference	UNITS ----- -	141303-6 160259-1	141303-7 160259-61
Depth Date Sampled Type of sample	----- ----- -----	0-20 04/02/2016 Soil	0-20 04/02/2016 Soil
Date prepared	-	12/02/2016	12/02/2016
Date analysed	-	15/02/2016	15/02/2016
Moisture	%	9.1	7.1

Method ID	Methodology Summary
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-2	105%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-2	105%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-2	104%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-2	100%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-2	103%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-2	108%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-2	103%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	93	[NT]	[NT]	LCS-2	95%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-2	101%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	111%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	111%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-2	101%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	111%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-2	111%
Surrogate o-Terphenyl	%		Org-003	84	[NT]	[NT]	LCS-2	95%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			13/02/2016	[NT]	[NT]	LCS-2	13/02/2016
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	98%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	95%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	93%
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	94%
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	97%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-2	105%
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	LCS-2	118%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	99	[NT]	[NT]	LCS-2	123%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	80%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	74%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	72%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	82%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	90%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	87%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	94%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	92%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	89%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-2	86%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	85	[NT]	[NT]	LCS-2	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	98%
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	84%
Dimethoate	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	98%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	97%
Malathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	86%
Parathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	92%
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-2	115%
Surrogate TCMX	%		Org-008	85	[NT]	[NT]	LCS-2	90%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-2	113%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	85	[NT]	[NT]	LCS-2	90%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date prepared	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-2	12/02/2016
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-2	101%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-2	94%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	97%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	95%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	95%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-2	93%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	93%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-2	96%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Misc Soil - Inorg						Base II Duplicate II %RPD		
Date prepared	-			12/02/2016	[NT]	[NT]	LCS-1	12/02/2016
Date analysed	-			12/02/2016	[NT]	[NT]	LCS-1	12/02/2016
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	LCS-1	102%
QUALITYCONTROL	UNITS	Dup. Sm#		Duplicate		Spike Sm#	Spike % Recovery	
PAHs in Soil				Base + Duplicate + %RPD				
Date extracted	-	[NT]		[NT]		141303-2	12/02/2016	
Date analysed	-	[NT]		[NT]		141303-2	13/02/2016	
Naphthalene	mg/kg	[NT]		[NT]		141303-2	95%	
Acenaphthylene	mg/kg	[NT]		[NT]		[NR]	[NR]	
Acenaphthene	mg/kg	[NT]		[NT]		[NR]	[NR]	
Fluorene	mg/kg	[NT]		[NT]		141303-2	93%	
Phenanthrene	mg/kg	[NT]		[NT]		141303-2	91%	
Anthracene	mg/kg	[NT]		[NT]		[NR]	[NR]	
Fluoranthene	mg/kg	[NT]		[NT]		141303-2	93%	
Pyrene	mg/kg	[NT]		[NT]		141303-2	97%	
Benzo(a)anthracene	mg/kg	[NT]		[NT]		[NR]	[NR]	
Chrysene	mg/kg	[NT]		[NT]		141303-2	111%	
Benzo(b,j,k)fluoranthene	mg/kg	[NT]		[NT]		[NR]	[NR]	
Benzo(a)pyrene	mg/kg	[NT]		[NT]		141303-2	118%	
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]		[NT]		[NR]	[NR]	

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	141303-2	101%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	141303-2	12/02/2016
Date analysed	-	[NT]	[NT]	141303-2	12/02/2016
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	141303-2	83%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	141303-2	82%
Heptachlor	mg/kg	[NT]	[NT]	141303-2	93%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	141303-2	91%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	141303-2	90%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	141303-2	88%
Dieldrin	mg/kg	[NT]	[NT]	141303-2	92%
Endrin	mg/kg	[NT]	[NT]	141303-2	101%
pp-DDD	mg/kg	[NT]	[NT]	141303-2	93%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	141303-2	84%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	141303-2	74%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	141303-2	12/02/2016
Date analysed	-	[NT]	[NT]	141303-2	12/02/2016
Azinphos-methyl (Guthion)	mg/kg	[NT]	[NT]	[NR]	[NR]
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	141303-2	92%
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	[NT]	[NT]	141303-2	85%
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	141303-2	109%
Fenitrothion	mg/kg	[NT]	[NT]	141303-2	99%
Malathion	mg/kg	[NT]	[NT]	141303-2	82%
Parathion	mg/kg	[NT]	[NT]	141303-2	85%
Ronnel	mg/kg	[NT]	[NT]	141303-2	110%
Surrogate TCMX	%	[NT]	[NT]	141303-2	74%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	141303-2	12/02/2016
Date analysed	-	[NT]	[NT]	141303-2	12/02/2016
Aroclor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	[NT]	[NT]	141303-2	106%
Aroclor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	141303-2	74%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	141303-2	12/02/2016
Date analysed	-	[NT]	[NT]	141303-2	12/02/2016
Arsenic	mg/kg	[NT]	[NT]	141303-2	102%
Cadmium	mg/kg	[NT]	[NT]	141303-2	93%
Chromium	mg/kg	[NT]	[NT]	141303-2	92%
Copper	mg/kg	[NT]	[NT]	141303-2	101%
Lead	mg/kg	[NT]	[NT]	141303-2	93%
Mercury	mg/kg	[NT]	[NT]	141303-2	93%
Nickel	mg/kg	[NT]	[NT]	141303-2	91%
Zinc	mg/kg	[NT]	[NT]	141303-2	90%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

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

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

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Appendix C

LABORATORY QA/QC REPORTS

QUALITY CONTROL REPORT

Work Order	: ES1602850	Page	: 1 of 37
Client	: GEOLYSE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR BRENDAN STUART	Contact	:
Address	: PO BOX 1963 ORANGE NSW, AUSTRALIA 2800	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: bstuart@geolyse.com	E-mail	:
Telephone	: +61 02 6393 5000	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 6393 5050	Facsimile	: +61-2-8784 8500
Project	: 214358	QC Level	: NEPM 2013 B3 & ALS QC Standard
Order number	: ----	Date Samples Received	: 09-Feb-2016
C-O-C number	: ----	Date Analysis Commenced	: 10-Feb-2016
Sampler	: ----	Issue Date	: 15-Feb-2016
Site	: ----	No. of samples received	: 77
Quote number	: ----	No. of samples analysed	: 77

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited
Laboratory 825

Accredited for
compliance with
ISO/IEC 17025.

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Pabi Subba	Senior Organic Chemist	Sydney Inorganics, Smithfield, NSW
Pabi Subba	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Shaun Spooner	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW



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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 356146)									
ES1602835-024	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	10.6	10.7	1.10	0% - 50%
ES1602835-035	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	16.6	16.8	1.42	0% - 50%
EA055: Moisture Content (QC Lot: 356147)									
ES1602850-007	CH8	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	9.4	9.8	4.51	No Limit
ES1602850-018	CH21	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	10.4	10.8	3.33	0% - 50%
EA055: Moisture Content (QC Lot: 356148)									
ES1602850-028	CH32	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	7.1	7.8	8.99	No Limit
ES1602850-039	CH43	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	7.1	7.2	1.55	No Limit
EA055: Moisture Content (QC Lot: 356149)									
ES1602850-048	CH52	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	30.7	30.4	0.992	0% - 20%
ES1602850-059	CH64B	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	5.9	5.9	0.00	No Limit
EA055: Moisture Content (QC Lot: 356150)									
ES1602850-068	CH74	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	9.5	9.2	3.32	No Limit
ES1602850-078	CH13	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	11.0	11.0	0.00	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 357486)									
ES1602789-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	9	9	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	20	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	14	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	42	42	0.00	No Limit
ES1602850-009	CH10	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	23	29	25.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	18	22	16.1	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	25	26	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	16	18	9.92	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	103	98	5.00	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 357682)									
ES1602850-010	CH11	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	43	42	0.00	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	60	58	3.01	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	23	0.00	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 (%)
EG005T: Total Metals by ICP-AES (QC Lot: 357682) - continued									
ES1602850-010	CH11	EG005T: Lead	7439-92-1	5	mg/kg	12	12	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	112	123	9.49	0% - 20%
ES1602850-020	CH24	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	58	48	19.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	16	16	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	16	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	20	7.15	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	604	583	3.61	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 357683)									
ES1602850-031	CH35	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	34	29	14.2	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	13	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	15	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	13	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	90	63	35.2	0% - 50%
ES1602850-041	CH45	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	51	48	6.57	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	16	16	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	16	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	14	17	16.9	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	97	98	1.16	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 357873)									
ES1602835-018	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	12	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	13	14	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	10	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	17	8.76	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	12	16.8	No Limit
ES1602850-059	CH64B	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	48	43	10.3	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	11	11	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	8	8	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	9	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	14	15	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 357487)									



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 (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 357487) - continued									
ES1602789-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1602850-009	CH10	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 357681)									
ES1602850-010	CH11	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1602850-020	CH24	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 357684)									
ES1602850-031	CH35	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1602850-041	CH45	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 357874)									
ES1602835-018	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1602850-059	CH64B	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 355251)									
ES1602850-001	CH1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1602850-011	CH15	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 355281)									
ES1602819-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 355514)									
ES1602850-078	CH13	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 355250)									
ES1602850-001	CH1	EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	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: 355250) - continued									
ES1602850-001	CH1	EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602850-011	CH15	EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 355255)									
ES1602850-056	CH60	EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	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: 355255) - continued									
ES1602850-056	CH60	EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602850-066	CH71	EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 355263)									
ES1602850-036	CH40	EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	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: 355263) - continued									
ES1602850-036	CH40	EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602850-046	CH50	EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 355278)									
ES1602850-029	CH33	EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	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: 355278) - continued									
ES1602850-029	CH33	EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602819-001	Anonymous	EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
EP068A: Organochlorine Pesticides (OC) (QC Lot: 355513)									
ES1602850-078	CH13	EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	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: 355513) - continued									
ES1602850-078	CH13	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355250)									
ES1602850-001	CH1	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		ES1602850-011	CH15	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05
EP068: Bromophos-ethyl	4824-78-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Carbophenothion	786-19-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorfenvinphos	470-90-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorpyrifos	2921-88-2			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorpyrifos-methyl	5598-13-0			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Demeton-S-methyl	919-86-8			0.05	mg/kg	<0.05	<0.05	0.00	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 (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355250) - continued									
ES1602850-011	CH15	EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355255)									
ES1602850-056	CH60	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602850-066	CH71	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	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 (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355255) - continued									
ES1602850-066	CH71	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355263)									
ES1602850-036	CH40	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		ES1602850-046	CH50	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05
EP068: Bromophos-ethyl	4824-78-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Carbophenothion	786-19-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorfenvinphos	470-90-6			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorpyrifos	2921-88-2			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Chlorpyrifos-methyl	5598-13-0			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Demeton-S-methyl	919-86-8			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Diazinon	333-41-5			0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	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 (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355263) - continued									
ES1602850-046	CH50	EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355278)									
ES1602850-029	CH33	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1602819-001	Anonymous	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	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 (%)		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355278) - continued											
ES1602819-001	Anonymous	EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 355513)											
ES1602850-078	CH13	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit		
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit		
				EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP075(SIM)A: Phenolic Compounds (QC Lot: 355249)									
ES1602850-001	CH1	EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
				EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	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)A: Phenolic Compounds (QC Lot: 355249) - continued									
ES1602850-001	CH1	EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
ES1602850-011	CH15	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 355280)									
ES1602819-001	Anonymous	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 355516)									
ES1602850-078	CH13	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	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: 355249)									
ES1602850-001	CH1	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES1602850-011	CH15	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	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: 355280)									
ES1602819-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 355516)									
ES1602850-078	CH13	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	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: 355516) - continued									
ES1602850-078	CH13	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355248)									
ES1602850-001	CH1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1602850-011	CH15	EP071: C15 - C28 Fraction	----	100	mg/kg	220	180	20.3	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	120	160	26.2	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355277)									
ES1602850-001	CH1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES1602850-011	CH15	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355279)									
ES1602819-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355299)									
ES1602825-019	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES1602831-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355515)									
ES1602850-078	CH13	EP071: C15 - C28 Fraction	----	100	mg/kg	550	520	5.12	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	520	440	16.4	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 355568)									
ES1602627-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355248)									
ES1602850-001	CH1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1602850-011	CH15	EP071: >C16 - C34 Fraction	----	100	mg/kg	320	280	12.2	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	120	18.2	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355277)									
ES1602850-001	CH1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1602850-011	CH15	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355279)									
ES1602819-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355279) - continued									
ES1602819-001	Anonymous	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355299)									
ES1602825-019	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1602831-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355515)									
ES1602850-078	CH13	EP071: >C16 - C34 Fraction	----	100	mg/kg	970	880	9.37	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	160	130	17.3	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 355568)									
ES1602627-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 355277)									
ES1602850-001	CH1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1602850-011	CH15	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 355299)									
ES1602825-019	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1602831-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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 Work Order : ES1602850
 Client : GEOLYSE PTY LTD
 Project : 214358



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: 355299) - continued									
ES1602831-002	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 355568)									
ES1602627-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High		
	<5	21.7 mg/kg	106	86	126
	<1	4.64 mg/kg	99.1	83	113
	<2	43.9 mg/kg	99.0	76	128
	<5	32 mg/kg	102	86	120
	<5	40 mg/kg	105	80	114
	<2	55 mg/kg	105	87	123
	<5	60.8 mg/kg	107	80	122
	<5	21.7 mg/kg	105	86	126
	<1	4.64 mg/kg	103	83	113
	<2	43.9 mg/kg	103	76	128
	<5	32 mg/kg	114	86	120
	<5	40 mg/kg	101	80	114
	<2	55 mg/kg	109	87	123
	<5	60.8 mg/kg	109	80	122
	<5	21.7 mg/kg	103	86	126
	<1	4.64 mg/kg	97.6	83	113
	<2	43.9 mg/kg	97.7	76	128
	<5	32 mg/kg	113	86	120
	<5	40 mg/kg	97.9	80	114
	<2	55 mg/kg	103	87	123
	<5	60.8 mg/kg	97.8	80	122
	<5	21.7 mg/kg	96.7	86	126
	<1	4.64 mg/kg	101	83	113
	<2	43.9 mg/kg	90.1	76	128
	<5	32 mg/kg	94.8	86	120
	<5	40 mg/kg	92.6	80	114
	<2	55 mg/kg	99.3	87	123
	<5	60.8 mg/kg	103	80	122
	<0.1	2.57 mg/kg	80.4	70	105



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357681) - continued								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	78.7	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357684)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	79.2	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357874)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	81.2	70	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355251)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	93.0	62	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355281)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	80.0	62	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355514)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	92.0	62	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 355250)								
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	69	121
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	67	115
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	108	66	120
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	69	115
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	69	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	66	116
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	67	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	69	115
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	64	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	65	117
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	66	116
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	62	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	56	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	64	122
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	68	116
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	67	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	62	118
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	65	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	107	54	130
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	63	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 355255)								
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.5	69	121
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	67	115
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	102	66	120
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	69	115



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 355255) - continued								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	69	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	66	116
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	67	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	69	115
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.7	64	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.1	65	117
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	66	116
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	62	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.7	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	101	56	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	64	122
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	68	116
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.9	67	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	62	118
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	65	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	96.4	54	130
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	63	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 355263)								
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	69	121
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	67	115
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	97.5	66	120
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	69	115
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	69	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	66	116
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	67	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	69	115
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	64	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	65	117
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	105	66	116
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	62	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	56	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	64	122
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	68	116
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	67	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	62	118
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	65	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	79.9	54	130
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	63	117



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 355278)								
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	69	121
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	67	115
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	107	66	120
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	69	115
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	69	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	66	116
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	67	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	69	115
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	64	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.3	65	117
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	66	116
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	62	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	104	56	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	100	64	122
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	68	116
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	67	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	62	118
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	65	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	97.5	54	130
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	63	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 355513)								
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	69	121
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.1	67	115
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	98.0	66	120
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	69	115
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	69	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.7	66	116
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	67	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	109	69	115
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	64	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	65	117
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	108	66	116
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	62	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	56	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	64	122
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	68	116
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	67	115



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 355513) - continued								
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	87.9	62	118
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	65	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	63.5	54	130
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	63	117
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355250)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.7	41	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	66	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	65	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	69	121
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	76	118
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	72	120
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	62	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	70	120
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	59	119
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	67	119
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	68	120
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.2	68	124
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.9	69	117
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	68	122
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	78.2	54	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	89.9	64	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.8	68	120
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	100	70	116
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	62	112
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355255)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	68.1	41	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	66	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	65	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.9	69	121
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	76	118
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	72	120
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	62	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	70	120
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	97.1	59	119
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	67	119
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	68	120
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	68	124
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	69	117
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	68	122



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355255) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	92.4	54	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	91.5	64	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	89.3	68	120
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	70	116
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	62	112
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355263)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	64.7	41	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.6	66	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	65	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	69	121
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	76	118
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	72	120
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	62	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	70	120
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	59	119
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	67	119
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	68	120
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.5	68	124
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	69	117
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	68	122
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	91.3	54	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	80.7	64	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	90.7	68	120
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	81.9	70	116
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	103	62	112
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355278)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	67.3	41	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	66	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	65	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	69	121
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	76	118
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	72	120
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	62	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	70	120
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	59	119
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	67	119
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	68	120
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	68	124
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	69	117



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355278) - continued								
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	68	122
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	99.7	54	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	92.8	64	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	91.5	68	120
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	70	116
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	87.1	62	112
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355513)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	72.1	41	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	66	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	65	127
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	75.1	69	121
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	76	118
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	72	120
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	62	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	70	120
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	59	119
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	67	119
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	68	120
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	68	124
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	69	117
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	77.2	68	122
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	65.4	54	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	89.8	64	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.8	68	120
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	70	116
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	62	112
EP075(SIM)A: Phenolic Compounds (QCLot: 355249)								
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	80.0	60	114
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	77.4	54	114
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	87.0	66	120
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	115	68	126
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	94.4	70	120
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	88.0	72	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	92.6	71	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	64.2	54	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	97.2	67	127
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	90.6	70	116
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	16.7	10	57
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	85.8	71	125



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)A: Phenolic Compounds (QCLot: 355280)								
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	63.2	60	114
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	66.8	54	114
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	76.7	66	120
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	88.4	68	126
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	82.1	70	120
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	89.6	72	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	87.7	71	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	71.8	54	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	85.0	67	127
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	82.6	70	116
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	20.4	10	57
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	99.8	71	125
EP075(SIM)A: Phenolic Compounds (QCLot: 355516)								
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	80.3	60	114
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	74.1	54	114
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.9	66	120
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	89.5	68	126
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	87.2	70	120
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	95.4	72	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	98.3	71	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	70.5	54	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	101	67	127
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.6	70	116
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	36.5	10	57
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	101	71	125
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355249)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	108	73	127
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	103	72	124
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	116	77	127
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	102	69	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	102	70	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	94.3	68	116
	205-82-3							
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	87.0	63	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	103	74	126
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	104	75	127
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	93.8	62	118
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	112	73	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	109	72	126



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355249) - continued								
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	90.8	61	121
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	107	77	125
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	110	75	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	115	74	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355280)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	85.0	73	127
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	85.6	72	124
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	88.4	77	127
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	86.9	69	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	82.0	70	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	86.3	68	116
	205-82-3							
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	86.4	63	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	88.7	74	126
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	90.6	75	127
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	81.1	62	118
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	84.4	73	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	88.9	72	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	82.3	61	121
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	88.8	77	125
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	88.1	75	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	84.4	74	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355516)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	95.5	73	127
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	90.8	72	124
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	104	77	127
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	87.4	69	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	94.5	70	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	90.6	68	116
	205-82-3							
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	89.0	63	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.4	74	126
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	103	75	127
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	89.8	62	118
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	98.1	73	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	94.8	72	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	86.6	61	121
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	99.4	77	125
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	101	75	127



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355516) - continued								
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	99.7	74	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355248)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	119	75	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	119	77	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	122	71	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355277)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	90.4	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355279)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	118	75	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	121	77	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	120	71	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355299)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	115	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355515)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	107	75	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	117	77	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	106	71	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355568)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.3	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355248)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	115	77	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	122	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	101	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355277)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	89.0	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355279)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	116	77	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	121	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	101	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355299)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	114	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355515)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	115	77	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	117	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	95.1	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355568)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	96.6	68	128



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080: BTEXN (QCLot: 355277)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	92.4	62	116
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	92.6	65	117
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	91.7	66	118
	106-42-3							
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.5	63	119
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	90.0	68	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	94.0	67	121
EP080: BTEXN (QCLot: 355299)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	108	62	116
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	113	65	117
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	113	66	118
	106-42-3							
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	110	63	119
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	113	68	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	112	67	121
EP080: BTEXN (QCLot: 355568)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.6	62	116
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	102	65	117
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	108	66	118
	106-42-3							
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	95.6	63	119
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	68	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	105	67	121

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low High	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number				
EG005T: Total Metals by ICP-AES (QCLot: 357486)							
ES1602789-007	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	101	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	100	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	102	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	99.5	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	96.1	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	100	70	130

Sub-Matrix: **SOIL**

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: 357682)							
ES1602850-011	CH15	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	109	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	99.7	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	104	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	102	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	74.3	70	130
EG005T: Total Metals by ICP-AES (QCLot: 357683)							
ES1602850-032	CH36	EG005T: Arsenic	7440-38-2	50 mg/kg	99.8	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	100	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	95.0	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	101	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	99.8	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	97.3	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	95.5	70	130
EG005T: Total Metals by ICP-AES (QCLot: 357873)							
ES1602835-018	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.2	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.1	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.3	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	95.4	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	96.6	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.1	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	100.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357487)							
ES1602789-006	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	96.8	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357681)							
ES1602850-010	CH11	EG035T: Mercury	7439-97-6	5 mg/kg	94.8	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357684)							
ES1602850-031	CH35	EG035T: Mercury	7439-97-6	5 mg/kg	93.7	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 357874)							
ES1602835-018	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	91.1	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355251)							
ES1602850-001	CH1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.0	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355281)							
ES1602819-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	91.0	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 355514)							

Matrix Spike (MS) Report

<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Recovery Limits (%)</i>	
<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>



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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355250) - continued							
ES1602850-001	CH1	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	78.6	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.5	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	105	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	87.0	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	92.2	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355255)							
ES1602850-056	CH60	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	88.4	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	85.8	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	89.1	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	106	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	92.7	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355263)							
ES1602850-036	CH40	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	86.3	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	83.3	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	88.2	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	86.8	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	94.6	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355278)							
ES1602819-001	Anonymous	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	84.8	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	88.5	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	87.7	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	76.4	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	89.7	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 355513)							
ES1602850-078	CH13	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	106	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	80.0	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	90.0	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	101	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	101	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 355249)							
ES1602850-001	CH1	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	92.0	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	83.7	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	96.8	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	74.0	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	88.0	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 355280)							
ES1602819-001	Anonymous	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	91.0	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
EP075(SIM)A: Phenolic Compounds (QCLot: 355280) - continued							
ES1602819-001	Anonymous	EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	84.1	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	83.1	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	61.0	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	97.4	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 355516)							
ES1602850-078	CH13	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	80.8	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	72.4	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	74.6	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	59.9	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	90.3	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355249)							
ES1602850-001	CH1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	114	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355280)							
ES1602819-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	74.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	79.0	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 355516)							
ES1602850-078	CH13	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	72.7	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	87.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355248)							
ES1602850-001	CH1	EP071: C10 - C14 Fraction	----	523 mg/kg	102	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	104	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	118	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355277)							
ES1602850-001	CH1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	98.4	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355279)							
ES1602819-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	90.7	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	103	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	123	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355299)							
ES1602825-019	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	116	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355515)							
ES1602850-078	CH13	EP071: C10 - C14 Fraction	----	523 mg/kg	87.4	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	84.4	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	92.5	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 355568)							

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: 355568) - continued							
ES1602627-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	93.5	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355248)							
ES1602850-001	CH1	EP071: >C10 - C16 Fraction	----	860 mg/kg	95.6	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	119	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	122	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355277)							
ES1602850-001	CH1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	98.1	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355279)							
ES1602819-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	92.4	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	113	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	122	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355299)							
ES1602825-019	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	113	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355515)							
ES1602850-078	CH13	EP071: >C10 - C16 Fraction	----	860 mg/kg	95.1	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	97.5	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	99.9	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 355568)							
ES1602627-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	83.8	70	130
EP080: BTEXN (QCLot: 355277)							
ES1602850-001	CH1	EP080: Benzene	71-43-2	2.5 mg/kg	96.2	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	98.3	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	96.9	70	130
			106-42-3				
		EP080: Naphthalene	91-20-3	2.5 mg/kg	92.1	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	98.4	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	95.4	70	130
EP080: BTEXN (QCLot: 355299)							
ES1602825-019	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	107	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	112	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	110	70	130
			106-42-3				
		EP080: Naphthalene	91-20-3	2.5 mg/kg	108	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	112	70	130
	EP080: Toluene	108-88-3	2.5 mg/kg	109	70	130	
EP080: BTEXN (QCLot: 355568)							



Sub-Matrix: SOIL

Laboratory sample IDClient sample IDMethod: CompoundCAS Number				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EP080: BTEXN (QCLot: 355568) - continued							
ES1602627-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	101	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	110	70	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	114	70	130
			106-42-3				
		EP080: Naphthalene	91-20-3	2.5 mg/kg	91.2	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	112	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	104	70	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES1602850	Page	: 1 of 12
Client	: GEOLYSE PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR BRENDAN STUART	Telephone	: +61-2-8784 8555
Project	: 214358	Date Samples Received	: 09-Feb-2016
Site	: ----	Issue Date	: 15-Feb-2016
Sampler	: ----	No. of samples received	: 77
Order number	: ----	No. of samples analysed	: 77

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

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

Summary of Outliers

Outliers : Quality Control Samples

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

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.

Sub-Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103)							



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content - Continued								
CH1, CH3, CH5, CH8, CH10, CH15, CH16B, CH18, CH20, CH23, CH25, CH28, CH30, CH32, CH34, CH36, CH38, CH40, CH42, CH44, CH46, CH48, CH50, CH52, CH54, CH56, CH58, CH60, CH64, CH65, CH67, CH69, CH71, CH74, CH76, CH78, CH80, CH82, CH13	CH2, CH4, CH7, CH9, CH11, CH16, CH17, CH19, CH21, CH24, CH26, CH29, CH31, CH33, CH35, CH37, CH39, CH41, CH43, CH45, CH47, CH49, CH51, CH53, CH55, CH57, CH59, CH61, CH64B, CH66, CH68, CH70, CH72, CH75, CH77, CH79, CH81, CH83,	04-Feb-2016	----	----	----	10-Feb-2016	18-Feb-2016	✓

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Subsampled by ALS (EA200)		04-Feb-2016	----	----	----	15-Feb-2016	02-Aug-2016	✓
CH1,	CH2,							
CH3,	CH4,							
CH5,	CH7,							
CH8,	CH9,							
CH10,	CH11,							
CH15,	CH16,							
CH16B,	CH17,							
CH18,	CH19,							
CH20,	CH21,							
CH23,	CH24,							
CH25,	CH26,							
CH28,	CH29,							
CH30,	CH31,							
CH32,	CH33,							
CH65,	CH74,							
CH76,	CH13							

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG005T: Total Metals by ICP-AES									
Soil Glass Jar - Unpreserved (EG005T)	CH1, CH3, CH5, CH8, CH10	CH2, CH4, CH7, CH9,	04-Feb-2016	11-Feb-2016	02-Aug-2016	✓	12-Feb-2016	02-Aug-2016	✓
Soil Glass Jar - Unpreserved (EG005T)	CH11, CH16, CH17, CH19, CH21, CH24, CH26, CH29, CH31, CH33, CH35, CH37, CH39, CH41, CH43, CH45, CH47, CH49, CH51, CH53,	CH15, CH16B, CH18, CH20, CH23, CH25, CH28, CH30, CH32, CH34, CH36, CH38, CH40, CH42, CH44, CH46, CH48, CH50, CH52, CH54	04-Feb-2016	11-Feb-2016	02-Aug-2016	✓	15-Feb-2016	02-Aug-2016	✓
Soil Glass Jar - Unpreserved (EG005T)	CH55, CH57, CH59, CH61, CH64B, CH75,	CH56, CH58, CH60, CH64, CH74, CH13	04-Feb-2016	12-Feb-2016	02-Aug-2016	✓	12-Feb-2016	02-Aug-2016	✓

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)		04-Feb-2016	11-Feb-2016	03-Mar-2016	✓	12-Feb-2016	03-Mar-2016	✓
CH1,	CH2,							
CH3,	CH4,							
CH5,	CH7,							
CH8,	CH9,							
CH10,	CH11,							
CH15,	CH16,							
CH16B,	CH17,							
CH18,	CH19,							
CH20,	CH21,							
CH23,	CH24,							
CH25,	CH26,							
CH28,	CH29,							
CH30,	CH31,							
CH32,	CH33,							
CH34,	CH35,							
CH36,	CH37,							
CH38,	CH39,							
CH40,	CH41,							
CH42,	CH43,							
CH44,	CH45,							
CH46,	CH47,							
CH48,	CH49,							
CH50,	CH51,							
CH52,	CH53,							
CH54								
Soil Glass Jar - Unpreserved (EG035T)		04-Feb-2016	12-Feb-2016	03-Mar-2016	✓	15-Feb-2016	03-Mar-2016	✓
CH55,	CH56,							
CH57,	CH58,							
CH59,	CH60,							
CH61,	CH64,							
CH64B,	CH74,							
CH75,	CH13							



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)		04-Feb-2016	10-Feb-2016	18-Feb-2016	✔	11-Feb-2016	21-Mar-2016	✔
CH1,	CH2,							
CH3,	CH4,							
CH5,	CH7,							
CH8,	CH9,							
CH10,	CH11,							
CH15,	CH16,							
CH16B,	CH17,							
CH18,	CH19,							
CH20,	CH21,							
CH23,	CH24,							
CH25,	CH26							
Soil Glass Jar - Unpreserved (EP066)		04-Feb-2016	11-Feb-2016	18-Feb-2016	✔	11-Feb-2016	22-Mar-2016	✔
CH13								



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)		04-Feb-2016	10-Feb-2016	18-Feb-2016	✔	11-Feb-2016	21-Mar-2016	✔
CH1,	CH2,							
CH3,	CH4,							
CH5,	CH7,							
CH8,	CH9,							
CH10,	CH11,							
CH15,	CH16,							
CH16B,	CH17,							
CH18,	CH19,							
CH20,	CH21,							
CH23,	CH24,							
CH25,	CH26,							
CH28,	CH29,							
CH30,	CH31,							
CH32,	CH33,							
CH34,	CH35,							
CH36,	CH37,							
CH38,	CH39							
Soil Glass Jar - Unpreserved (EP068)		04-Feb-2016	10-Feb-2016	18-Feb-2016	✔	12-Feb-2016	21-Mar-2016	✔
CH40,	CH41,							
CH42,	CH43,							
CH44,	CH45,							
CH46,	CH47,							
CH48,	CH49,							
CH50,	CH51,							
CH52,	CH53,							
CH54,	CH55,							
CH56,	CH57,							
CH58,	CH59,							
CH60,	CH61,							
CH64,	CH64B,							
CH65,	CH66,							
CH67,	CH68,							
CH69,	CH70,							
CH71,	CH72,							
CH76,	CH77,							
CH78,	CH79,							
CH80,	CH81,							
CH82,	CH83							
Soil Glass Jar - Unpreserved (EP068)		04-Feb-2016	11-Feb-2016	18-Feb-2016	✔	11-Feb-2016	22-Mar-2016	✔
CH13								

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071)								
CH1, CH3, CH5, CH8, CH10, CH15, CH16B, CH18, CH20, CH23, CH25, CH74,	CH2, CH4, CH7, CH9, CH11, CH16, CH17, CH19, CH21, CH24, CH26, CH75	04-Feb-2016	10-Feb-2016	18-Feb-2016	✓	11-Feb-2016	21-Mar-2016	✓
Soil Glass Jar - Unpreserved (EP071)								
CH13		04-Feb-2016	11-Feb-2016	18-Feb-2016	✓	11-Feb-2016	22-Mar-2016	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
CH1, CH3, CH5, CH8, CH10, CH15, CH16B, CH18, CH20, CH23, CH25, CH74,	CH2, CH4, CH7, CH9, CH11, CH16, CH17, CH19, CH21, CH24, CH26, CH75	04-Feb-2016	10-Feb-2016	18-Feb-2016	✓	11-Feb-2016	21-Mar-2016	✓
Soil Glass Jar - Unpreserved (EP075(SIM))								
CH13		04-Feb-2016	11-Feb-2016	18-Feb-2016	✓	12-Feb-2016	22-Mar-2016	✓

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 Work Order : ES1602850
 Client : GEOLYSE PTY LTD
 Project : 214358



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)		04-Feb-2016	10-Feb-2016	18-Feb-2016	✔	10-Feb-2016	18-Feb-2016	✔
CH25, CH74,	CH26, CH75							
Soil Glass Jar - Unpreserved (EP080)		04-Feb-2016	10-Feb-2016	18-Feb-2016	✔	11-Feb-2016	18-Feb-2016	✔
CH1,	CH2,							
CH3,	CH4,							
CH5,	CH7,							
CH8,	CH9,							
CH10,	CH11,							
CH15,	CH16,							
CH16B,	CH17,							
CH18,	CH19,							
CH20,	CH21,							
CH23,	CH24,							
CH13								



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	10	99	10.10	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	32	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	9	83	10.84	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	8	79	10.13	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	8	80	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	5	44	11.36	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	3	32	9.38	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	5	83	6.02	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	3	30	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	79	5.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	80	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	37	8.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	44	6.82	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	3	32	9.38	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	5	83	6.02	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	3	30	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	79	5.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	80	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	37	8.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	44	6.82	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	3	32	9.38	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	5	83	6.02	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	3	30	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	79	5.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	80	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	37	8.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	44	6.82	5.00	✓	NEPM 2013 B3 & ALS QC Standard



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).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 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 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270D 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	In house: Referenced to USEPA SW 846 - 8270D 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	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D 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	In house: Referenced to 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.
Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	In house: Referenced to 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, Na ₂ SO ₄ 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.

Asbestos Removal Control Plan

Contractor Details & Notifications			
A	Licence & Company details	P&D Bamford Enterprises T/A Lidoran Group ABN16 057 927 009 Friable Asbestos Work Licence No. 210641	13 Egerton St, Silverwater, NSW, 2128 Ph (02) 9648 6991 Fax: (02) 9648 4864
B	Notifications	Workcover notification to be obtained prior to start. Copies of AS1 Licence, ARCP, SWMS and employee qualifications to be kept on site at all times Notification of tenants of neighbouring properties, who may be affected by works, to be carried out by controller of premises, prior to start	Workcover notification to be obtained prior to start. Copies of AS1 Licence, ARCP, SWMS and employee qualifications to be kept on site at all times
Identification		Buildings and Structures	
		Friable	Non-Friable
C	Details of the ACM to be removed (eg. the location(s), whether it is friable or non-friable, type, condition and the quantity to be removed). See section 7.2.4		Non Friable asbestos sheeting & debris. Approximately 8,000m2 Non friable asbestos irrigation pipes. Quantity unknown.
Preparation			
D	Consultation See section 7.1		Consultation between P&D Bamford supervisor, Client and Hygienist will be active at all times with regard to the scheduling and works being undertaken

Asbestos Removal Control Plan

E	Assigned responsibilities for the removal	Mick Bunting P&DB Project Manager 0402938138 Pha Sourn P&DB Supervisor 0412 171 245 P&DB First Aid Officer	Project Manager - Ensuring that all procedures are adhered to in accordance with the <i>WHS Code of Practice- How to safely remove asbestos- 2011</i> and that operational targets are being met - Liaise with the client representative and the Hygienist concerning scheduling and works being undertaken P&DB supervisor - Ensuring that the individual team members are complying with all safety procedures as laid out in the <i>WHS Code of Practice- How to safely remove asbestos- 2011</i> - Reporting daily, and as required, to the Project Manager P&DB First Aid Officer
		Phil Bamford P&DB General manager 0418 612 522 Jonathan Williams WHS Manager 0448 773 565	Phil Bamford P&DB General manager -
F	Program of works		Program of works for Non Friable asbestos removal :- Preparation TBA Asbestos removal TBA

Asbestos Removal Control Plan

G	Emergency plans See section 8.2	- Emergency Response Equipment to be used	Detailed within the SWMS are: - Emergency and Evacuation Procedures First aid – Pha Sourn - First Aid Kit - Material Safety Data Sheets - Mobile Phones
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Asbestos Removal Control Plan

		Buildings and Structures	
		Friable	Non-Friable
H	Asbestos removal boundaries, including the type and extent of isolation required and the location of any signs and barriers. See sections 9.1 and 9.2		Buildings will be closed during the works. The enclosure will be inspected by the hygienist prior to works commencing. Asbestos Removal warning signs will be placed outside the immediate removal area & safety bunting tape used to stop unauthorised persons entering the asbestos removal works area.
	Control of electrical and lighting installations. See section 9.3		n/a
	Personal protective equipment (PPE) to be used, including respiratory protective equipment (RPE). See section 9.7		Asbestos operatives will wear the following asbestos PPE whilst undertaking internal works. P2, particulate half face mask, coveralls, safety boots, gloves
	Details of air monitoring program. See section 9.8		Air Monitoring will be undertaken during all asbestos removal works. Hygienist to liaise with the P&DB supervisor prior to the commencement of each removal shift to discuss locations of air monitors The hygienist for air monitoring will be - Phil Clifton & Associates If levels of dust are detected above the guide lines work will stop. The Hygienist will review work methods and implement changes as may be required to ensure readings are within the guide lines

Asbestos Removal Control Plan

	Waste storage and disposal program. See section 9.10		All asbestos removed from building will be placed immediately in a bin or tipper truck wrapped in 200um plastic or double bagged Asbestos waste bag Bag to be goose neck taped. P&DB supervisor to inspect the wrapped bin/truck prior to transporting to a DECC approved tip facility. Bin/truck location to be approved by hygienist. Asbestos waste to be transported directly to Gunnedah waste management depot, 418 Quia Rd, Gunnedah Tipping receipts will be made available to the client
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Asbestos Removal Control Plan

		Buildings and Structures	
		Friable	Non-Friable
Removal			
k	Methods for removing the ACM (wet or dry methods) See section 9.5	.	Asbestos sheets will be accessed using Scaffold or ladders, and sprayed with 30% PVA solution to encapsulate dusts. Asbestos sheets will be removed whole where possible. Pipes will be misted with water. Pieces to be wrapped in plastic or placed in plastic bags and taken to bin. Framework will be vacuumed using HEPA Filtered equipment and sprayed with PVA, waste materials to be disposed of as asbestos waste
l	Asbestos removal equipment (spray equipment, asbestos vacuum cleaners, cutting tools, etc) See section 9.6		200um plastic, knives, Mobile scaffolding, ladders. 18 volt battery screw guns may be used to fix timber to hold plastic and/or unscrew sheets. Spray equipment will be hand operated sprayers . Hygienist to inspect before leaving
m	Details on required enclosures (see sections 10.1, 10.2 and 10.3), including details on their size, shape, structure, etc, smoke testing enclosures (see section 10.2.2) and the location of negative exhaust units (see section 10.1)		N.A Non Friable AC
n	Details on temporary buildings required by the asbestos removalist (eg. decontamination units) (see sections 10.1 and 10.2) including details on water, lighting and power requirements, negative air pressure exhaust units (see section 10.1) and the locations of decontamination units (see sections 10.2.3 and 10.2.4)		Decontamination areas to be established at the boundary of the work Decons will be set up for the purpose of decontamination of personnel , tools etc, prior to exiting the building

Asbestos Removal Control Plan

		Buildings and Structures	
		Friable	Non-Friable
Decontamination			
o	Other control measures to be used to contain asbestos within the asbestos work area.		Consultation with hygienist is required on a daily basis Stock, machinery inside building to be covered with 200um plastic prior to start Mist spray, pva glue and vacuuming. PVA will be required to be sprayed onto building timber structure
p	Detailed procedures for workplace decontamination, the decontamination of tools and equipment, personal decontamination and the decontamination of non-disposable PPE and RPE. See section 9.9		All asbestos operatives are to proceed through the decontamination area at the completion of each asbestos removal stage No tools are to be removed from the 'dirty' works area until the hygienist has conducted a visual inspection & cleared the works area. The same decon area will be used to clean and remove tools at the end of work.

Asbestos Removal Control Plan

Waste Disposal			
q	Methods of disposing of asbestos wastes (see section 9.11), including details on the disposal of; • disposable protective clothing and equipment, and • the structure(s) used to enclose the removal area		All asbestos debris including removed material, contaminated PPE, plastic sheeting, are to be disposed of as asbestos waste & transported to an DECC approved tip facility. Consultation at all times with the hygienist must be carried out when dismantling the asbestos removal enclosure prior to handover area to client. Asbestos waste will be placed in transportable bin or tipper truck Waste will be tipped at Gunnedah waste depot.

Reference to :- WHS Act 2011, WHS Regulations 2011
WHS Code of Practice- How to safely remove asbestos- 2011
How to manage & control asbestos in workplaces 2011

Prepared by: Nigel Cole
Senior Estimator
P & D Bamford Enterprises Pty Ltd T/A Lidoran Group

date: 14/12/15

SAFE WORK METHOD STATEMENT ASBESTOS REMOVAL & METAL ROOFING WORKS

Project:	Old Gunnedah abattoir	Project No:	NDC 256
Project Address	Cnr Quia Road and Black Jack Road, Gunnedah	Leading hand:	
Project Manager:	Mick Bunting	SWMS No:	NC 256

Description of task/ activity to be undertaken:

Removal of asbestos roofing/wall cladding materials. Safe installation of roofing materials including roof sheets, flashings, cappings, guttering, and wall cladding materials, removal of in ground asbestos irrigation pipes as per scope of works

	Prepared Date: 14/12/15	Revision 1	
Prepared by:	N Cole		
Signed:			
Position:	Senior Estimator		
Reviewed by:			
Signed:			
Position:			
Amendments:			

Control categories considered (in order of priority)

- | | | |
|-------------------------|-----------------------|----------------------------------|
| 1 Elimination | 2 Substitution | 3 Isolation (Engineering) |
| 4 Administration | 5 Use of PPE | |

Applicable Legislation, Regulations, Codes of Practice, etc:
WHS Act 2011, WHS Regulations 2011
Codes of Practice: How to manage the risk of falls in the workplace Managing electrical risks in the workplace Hazardous manual tasks WHS Consultation, cooperation, coordination First Aid in the Workplace Managing the risk of plant in the workplace How to safely remove asbestos (2012) Management & Control of Asbestos in the Workplace (2012)
AS1891.4: 2009 Industrial fall-arrest systems and devices- Selection, use & maintenance
AS1576.H1:1995 Scaffolding General Requirements
AS1891.1:2007 Industrial fall-arrest systems and devices – Harnesses & ancillary equipment
AS2550.1:2002 Cranes, hoists & winches Part 1: General requirements
AS2550.10: Cranes, hoists, winches – Safe Use – Mobile elevating work platforms
AS4994.2 : 2009- Temporary Edge Protection- Installation & dismantling
AS/NZS 1892.5:2000- Portable ladders- Selection, safe use & care

Personnel Qualifications required for the task:

Task	Relevant Qualification
Construction tasks	WHS Construction Industry Induction
Working at heights	Heights Safety Operator
Use of power tools	Competent persons
Scissor lift/ EWP operation <11m	SL/ BL licence
Asbestos removal	Bonded Asbestos Removal Certificate
Asbestos Removal Supervisor	Bonded Asbestos Removal Supervisor Certificate

High Risk Work Involved

Risk of Falls greater than 2 metres
Work in Area with moving plant
Likely to involve disturbing asbestos
Work in a contaminated area
Work in an area with movement of powered mobile plant

Training Requirements:

WHS Construction Industry Induction Training
Site Safety Induction
Company Safe Management System Induction
Scissor Lift/ EWP operator training
Competency training in use of electrical equipment
Height Safety Operator Training

Plant and equipment involved in the task:

Type	Activity
Harnesses, lanyards, static lines, anchors	Fall protection
Electrical tools	General construction tasks
Scaffolding towers	Roof access
Scissor lift/Boom lift	Roof and wall access

Inspection checks to be carried out:

Harness and lanyard inspection by competent person 6 monthly
Electrical Equipment inspection, testing and tagging monthly
Scissor lift/Boom lift log books to be completed daily. Scheduled inspections and services

Hazardous materials involved in the task:

Type	Application
Silicone	Sealing metal joins
Fibreglass	Insulation

Personal Protective Equipment to be used for the task:

Mandatory	When required
UV protective clothing, Sunscreen	Gloves
Steel capped/ rubber soled footwear	Ear Muffs
P2 Masks, disposable coveralls	Eye protection
	Harness, lanyard and temporary anchor points
	Hard Hats

Associated SWMS:

Crane operators SWMS, Installation of static lines, Installation of Safety Rail

RISK ASSESSMENT REGISTER – Asbestos Removal & Metal Roofing

Date _____

Job Task	Hazard	Risks	Control Measures
Site preparation	- Unauthorised access - Moving of vehicles. - Unloading of vehicles. - Manual handling. - Establishing site shed	- Injuries to persons - Contact with vehicles and /or persons. Damage to property - Strains, cuts, abrasions - Connection of electricity- electrocution	-Obtain all necessary work permits from Client -All personnel to be site inducted prior to start - Create exclusion zones using temporary fence barriers and/or warning tape to prevent unauthorized access to site, - Warning signage, including Asbestos Removal , Workmen Above to be displayed at entrance to work site. -All personnel to wear PPE including high visibility vests, hard hats, steel capped footwear when working at ground level. - Senior first aid person & first aid kit to be available on site at all times. - Use licensed electrician to connect power to site shed, isolation and/or disconnection of power.
Accessing roof - Use of scissor lifts and/or Boom lifts (EWPs) and/or Scaffolding	- Incorrect operation, malfunctions, overloading, toppling - Working at heights	- Falls from heights - Injuries to personnel - Damages to property	-Use only by BL/SL licenced operators. -Ground conditions, site obstacles and services to be identified prior to use. -Scheduled servicing, pre start inspections, log book entries to be completed prior to use -All EWP personnel to wear harnesses attached to anchor points within EWP basket -Scaffolding towers to be built by licenced scaffolder
Installation of edge protection	-Working at heights -Machinery operation	-Falls from heights -Fall of materials from heights -Injuries to personnel -Damages to property	-Protective railings will be installed along the perimeter of roof to prevent falls from edge -Installation by Edge Safe personnel to AS 4994.2 (See assoc SWMS) -Create exclusion zones around work area -Personnel will access work area by EWP/scissor lift. -Railings will be clamped and/or fixed to walls below roof

Job Task	Hazard	Risks	Control Measures
Installation of static lines	- Working at heights -Manual handling	- Fall from heights - Fall of materials -Hand injuries from handling steel cables	-Install static lines on upper asbestos roof frame -Static lines to be installed to AS 1891.2 specifications, by competent persons -All roofing personnel to be Height Safety Operators -Create exclusion zones at ground level, using barriers, warning signage as required -Use harnesses (see note below) attached to temporary anchor points or static lines, at all times - Use gloves as necessary, have first aid kit on site
Asbestos removal process- pre-commencement	- Staff qualifications - Hazardous materials handling	- Injuries to personnel - Environmental contamination	- WorkCover permit required prior to start - Provide air monitoring inside and outside building as specified by hygienist - All asbestos removal staff to be trained and qualified for the tasks they perform - Asbestos removal supervisor to be on site at all times - Roofing personnel using harnesses to be qualified Height Safety Operators - All harnesses and associated equipment to be currently certified and inspected prior to use. - Personnel involved with asbestos removal will wear disposable coveralls, gloves and P2 rated masks - EWP and/or scissor lift will be located inside the building directly under asbestos stripping area, in case a rescue is required
Preparation of roofs - Roof access - Encapsulation process	- Working at heights -Hazardous materials Asbestos fibres	- Persons and/or materials falling from heights -Environmental contamination	-Create exclusion zones beneath work area using barriers and/or signage as required -Plant,equipment, stock below work zone to be covered in plastic prior to start - Personnel will access the roof using scaffold towers -All personnel to be wearing harnesses attached to static lines -All personnel will wear protective coveralls and P2 masks during this process -Asbestos sheets will be sprayed with 30% PVA solution to prevent fibre escape during removal process -Spraying will be done using long hoses attached to electric powered spray units positioned on scaffold towers.

Job Task	Hazard	Risks	Control Measures
Removal of existing roofing materials - Asbestos Removal of soil pipes - asbetosos	- Working at heights	- Falling from heights - Falling through rafters - Overloading structure	- Exclusion zones and warning signage to be used around base of work zone - Roof will be accessed using Scaffolding tower and/or EWPs(see EWP operation). -All personnel to wear coveralls and P2 masks - Personnel wearing harnesses will attach lanyard to static line,walk along screw lines of asbestos sheets until they reach designated area to be stripped. - Personnel will walk up the roof sheets extending lanyard rope as they progress - Asbestos sheets to be unscrewed using battery powered drills or hand tools, lifted by 2 persons and placed in packs not exceeding 500kg, at predetermined load points over steel trusses - Existing wire should not considered safe for fall protection, personnel will not walk on wire mesh during this process - Ground area to be sectioned off. Pipes to be remove as whole as possible. Emu pick to remove any visible pieces.
Crane operation See associated SWMS Operation of crane (Supplied by crane operator)	- Improper use, collapse, malfunctions	- Contact with personnel - Damage to property	- Use only licenced operators - Location of crane to be determined by operator and approved by Client prior to start - Location of services and other site hazards to be identified prior to start. Crane will maintain specified minimum clearance from services - Lifting gear to be currently certified, and inspected by competent person prior to use
Removal of asbestos packs by crane	- Packing and transporting asbestos materials	-Environmental contamination -Injuries to personnel	- Packs of asbestos will be slung by qualified dogman. -Dogman must have completed asbestos awareness training - Dogman will wear harness attached by lanyard to static line while working operating on roof - Packs of asbestos will be lifted by crane and lowered into plastic lined bins (double thickness 200um plastic). - Asbestos is to be thoroughly wetted using a fine mist spray during this process to prevent fibre escape.



Job Task	Hazard	Risks	Control Measures
Removal of asbestos packs by crane continued			- Filled bins to be securely taped down to prevent escape of asbestos fibres. - Bins to be transported by DECC licenced operators to DECC approved tipping site - Receipts for tipping to be made available to client on request
Removal of Wire Mesh and box gutters	- Working at heights -Machinery operation	- Falling from heights - Falling through rafters	-Obtain hot works permit from client if required - Box gutters will be removed prior to removal of safety wire. Box gutters to be cut with angle grinders - Personnel in harnesses and attached to static lines will lift sections of box gutter and place on roof frame over safety wire. Crane will lift gutter sections and lower to ground -Persons wearing harnesses, attached to static lines and/or temporary anchors, to work from roof scaffold platform, or EWPs when removing mesh. -Machinery operators to be appropriately licenced

Job Task	Hazard	Risks	Control Measures
Cleaning of purlins prior to reinstatement	- Hazardous materials -Working at heights	-Contamination of personnel -Environmental contamination -Falling from heights	-All cleaning personnel to wear disposable coveralls and P2 masks -Personnel to work from roofing scaffold platform, and/or EWP platforms -Personnel may be required to wear harnesses - Tops of purlins to be Vacuumed prior to reinstatement of roof materials - Hygienist to inspect framework and provide clearance prior to commencement of re roofing work
Loading of materials onto roof Installation of roofing materials	- Working at heights - Use of crane	- Falling from heights - Fall through battens - Overloading roof - Fall of materials	-Ensure exclusion zones are in place below work zone - Load roof using crane, placing materials in packs at predetermined load points - Dogman to sling loads with certified lifting gear - Materials to be securely strapped if left unattended - Box gutters will be installed first, 2 or more persons to handle long lengths -Box gutters may require welding- hot works permit to be obtained . -Installers to work from plywood platforms positioned over lower roof purlins. Installers will wear harnesses attached to static lines -Safety wire to be installed using EWPs to access either end of roof. Wire roll to be placed in one machine and drawn across roof using endless rope technique. Installation of wire to comply with C.O.P. -Installation of first roof sheet by roofers using roof scaffold work platform, or EWP for access -Installation of subsequent sheets by roofers using previously laid sheet as work platform. -Flashings to be installed whilst edge protection is in place

Job Task	Hazard	Risks	Control Measures
Installation of roofing materials -General tasks	-Use of machinery -Working at heights	-Mechanical failure, injuries to persons, damage to property -Falling from heights	-Use only by BL/SL/WP licenced operators. -Ground conditions and site obstacles and services to be identified prior to use. -Scheduled servicing, pre start inspections, log book entries to be completed prior to use -All Boom Lift personnel to wear harnesses attached to anchor points within Boom lift basket
	- Use of power tools	- Malfunctions , flying debris causing injuries - Noise- hearing damage	- Ensure all guards are in place - Operators competent in use - Use of PPE – Safety glasses, hearing protection as required
		- Electrocutation	- Use battery operated tools preferably - All power tools to be tested and tagged monthly. - Use RCDs at power source at all times -Leads shall be heavy duty, and plugged into nearest possible power source -Use caution when positioning leads over metal roof, protect leads against sharp edges
	- Hazardous substances: Silicon/Fibreglass	- Inhalation of fumes/fibres - Skin contamination	- Wear gloves, coveralls, face masks if affected or in confined space - Keep MSDS on site - Store silicon away from direct sunlight
	- Working with metal products	- Cuts, lacerations	- Use of PPE – gloves as required - Have senior first aid personnel in each crew on site at all times - Keep first aid kit on site
	- Inclement weather - Working in hot environment	- Windy conditions - Wet conditions- slips, falls - Hot conditions – Heat exhaustion, fatigue, dehydration, UV radiation	- Limited or no work in adverse conditions -Work will stop if wind speed exceeds 25kph, or if wind gusts exceed 40kph -Work will not proceed if there is greater than 80% chance of rain - Use of PPE – Hats, sunglasses, UV protection (sunscreen) as required -Have adequate supply of water/electrolytes on site -First aid persons to be on site at all times

Job Task	Hazard	Risks	Control Measures
Removal of wall sheets	-Working at heights -Operation of machinery -Hazardous materials	-Falling from heights -Mechanical failure, injuries to personnel, damages to property -Contamination of personnel and environment	-Asbestos wall sheeting will be removed using EWPs and/or scissor lifts for access. Boom lift personnel to wear harnesses attached to basket anchor points -Create exclusion zones around work zone. -Provide air monitoring as required by hygienist. -All personnel will be Asbestos Removal qualified, and wear coveralls and P2 masks -Asbestos sheets will be removed using hand tools and battery operated tools -Sheets will be lowered to the ground as they become available, and wrapped in 200um black plastic, to be placed in asbestos bins -Wall frame to be vacuumed and wet wiped. - Hygienist to provide clearance prior to reinstatement
Installation of wall sheets	-Working at heights -Operation of machinery	-Fall from heights -Fall of materials -Mechanical failure, injuries to personnel, damages to property	-Wall sheeting to be installed using EWPs/Scissor lift for access. Boom lift personnel to wear harnesses attached to basket anchor points -Create exclusion zones around work zone -Materials to be installed using hand tools and battery operated tools as required -Materials to be passed from ground to EWPs by hand as required
Cleaning and reinstatement of factory interior	- Hazardous materials - Manual Handling	- Contamination of environment - Injuries to personnel	- Plastic coverings to be removed using EWP/Scissor lifts for access - Surfaces to be vacuumed/wet wiped to remove asbestos fibres - Personnel to leave contaminated work zone via decontamination zones. Coveralls and disposable masks to be bagged and treated as contaminated waste. - Plastics, to be treated as contaminated waste and disposed of with asbestos materials - Hygienist to provide clearance certificate prior to hand over to Client

Job Task	Hazard	Risks	Control Measures
Housekeeping	- Loose materials -Hazardous materials	- Injuries to persons, cuts abrasions, trip hazards - Materials falling -Environmental contamination	- Materials or rubbish to be stored neatly on ground level and secured if left unattended. - Materials on roof to be securely strapped to roof frame if left unattended -All asbestos contaminated materials to be wrapped in 200um plastic sheeting or bagged in labeled Asbestos Waste bags and kept in sealed transportable bins, or tip truck -Transport waste to DECC approved site -Tipping receipts to be made available to client
General Construction Tasks	- Construction Site Hazards		- All personnel to be industry, site and job task inducted - All personnel to abide by site safety rules, P&D Bamford SWMS, & Safety Plan. - All personnel to be trained and qualified for the tasks they perform
	Hazards arising during course of construction		- Leading hand will assess site safety conditions daily and as job progresses. - Work will only commence/continue if conditions are considered safe. - If hazards and /or risks arise during the course of construction, work will cease, changes must be reported to the Site Manager and Lidoran Site Supervisor, and a risk assessment completed prior to recommencement of works



P & D BAMFORD ENTERPRISES PTY LTD
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13 Egerton St, Silverwater NSW 2128 PO Box 6925, Silverwater NSW 2128
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Job Task	Hazard	Risks	Control Measures
Amendments			



Work Method Statement Sign Off Sheet

Project: Old Gunnedah abattoir	Work Method Statement Number: NDC 256
Principal: Peter Speck	Work Area: roofs
Principal Contractor: P & D Bamford Enterprises Pty Ltd	Initiated by: N Cole Date: 14/12/15
Job Task: Safe removal of asbestos & installation of roofing and/or wall cladding materials as per scope of works	Management Review: Date:
Project Manager: Mick Bunting Leading Hand : <i>(Responsible for safe completion of works)</i>	Date to be reviewed: One month from commencement

JOB SAFETY ANALYSIS SIGN OFF AND ACCEPTANCE OF PROPOSED WORK METHOD AND ASSOCIATED RESPONSIBILITIES						
No.	Surname	First Name	Classification	Employed By	Signature	Date signed
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

EMERGENCY RESCUE PROCEDURE FOR FALL ARREST

Prior to any person working with safety harness, workers must familiarize themselves with the emergency rescue procedure for fall arrest system.

Vigilance is needed to supervise persons to ensure harnesses and fall arrest devices are used correctly and safely. Prolonged suspension from fall arrest systems can cause orthostatic intolerance or suspension trauma which can quickly lead to death.

Rescue must be carried out very carefully or it can also cause death. Moving a person quickly into a horizontal position - a natural reaction - is likely to cause a large volume of deoxygenated blood to move to the heart if a person has been suspended for an extended period. The heart may be unable to cope with the abrupt increase in blood flow, causing cardiac arrest.

Recommendations

1. People should always look to use alternative methods where use of safety harness can be minimized.
2. If fall arrest devices are to be used, it is essential to ensure that anchorages, arrest devices and harnesses are fit for purpose and correctly attached, fitted and worn.
3. If people have to use a harness then they should never be permitted to work alone.
4. Time in suspension should be limited to less than 5 minutes.
5. Harnesses should be selected for specific applications and must consider compliance, potential arrest injury and suspension trauma.
6. Rope/cable tenders must ensure the harness user is conscious at all times.
7. Tie-off lanyards should be anchored as high and as tight as work permits.
8. All people should be trained that motionless suspension in an upright position possible death for more than 5 minutes can lead to unconsciousness and possible death.
9. Be aware of the signs and symptoms of harness-induced death.
10. If self rescue is not possible, or a rescue cannot be performed promptly, people should be trained to pump their legs frequently to activate the muscles and prevent the risk of venous pooling.
11. Rescue suspended persons as quickly as possible.
12. People are trained that moving rescued workers into a horizontal position too rapidly can also cause death.

Should a worker require rescuing from an arrested fall, the following procedures may need to be implemented:

Where EWP is unavailable:

1. Ensure personal protection is sufficient to rescue someone and the procedures are carried out safely
2. Reach the suspended person by other means such as crane box or scaffold
3. Position the suspended person on to the platform to relieve suspension

Where a EWP is available:

1. A person who is familiar with the emergency controls on the EWP.
2. Reach and position the suspended person on to the platform of EWP/scissor lift safely.
3. Ensure do not over SWL on any EWP during rescue.
4. Contact the site manager and inform him of what has happened.

NOTE: At no time is a worker to place themselves at risk whilst attempting to undertake any of the above procedures

EMERGENCY RESCUE PROCEDURE FOR WORK ON ELEVATED WORK PLATFORMS

Prior to any person working on an elevated work platform, workers must familiarize themselves with the emergency decent controls at ground level on the EWP.

Should a worker require rescuing from an EWP for whatever reason (*i.e. equipment failure, injury / illness of the operator*) the following procedures may need to be implemented:

1. Contact the Emergency Rescue Services on 000
2. A person who is familiar with the emergency ground controls on the EWP and working in close proximity should try to carefully lower the platform (*be advised that the ground controls will override the platform controls*) Ensure that no persons are underneath the platform when using the emergency decent device.
3. Where it is not possible to use the emergency decent device. The following retrieval methods where applicable may need to be considered:
**Use of Tower Crane with man box * Use of Mobile Crane with man box *Use of Boom lift* Use of scissor lift*
4. Contact the supervisor and site manager and inform him of what has happened.

NOTE: At no time is a worker to place themselves at risk whilst attempting to undertake any of the above procedures.

It is important to remember that if a person is suspended in a harness, there is limited time to retrieve the worker before **Suspension trauma** sets in. It is therefore imperative to immediately instigate a rescue following an arrested fall

EMERGENCY AND EVACUATION PROCEDURES

FIRST AID

Senior First Aid personnel on site are:- Mick Bunting, Pha Sourn

First Aid Kit is located at the site office or in company vehicles.

Material Safety Data Sheets (MSDS) are located in site office or company vehicle and are to be used for first aid treatment reference when an incident occurs with a hazardous substance. **Issue Material Safety Data Sheets to ambulance officers.**

If the site office is unattended or the first aider cannot be located follow emergency procedures below :-

EMERGENCY PROCEDURE (Fire, Police, Ambulance)

- Telephone the State Authority required eg. Ambulance, Fire Brigade
Call 000 from landlines **Call 112 from mobile phones**
- Advise site security personnel if available.
- State the name of the building site _____
- Address of the site _____
- Specific location of the entrance _____
- Site contact number _____

LOCATION OF NEAREST MEDICAL CENTRE 27 Marquis street, Gunnedah

LOCATION OF NEAREST HOSPITAL Marquis street, Gunnedah

EVACUATION PROCEDURES

Evacuation of the work zone may be required in the case of a catastrophic event such as structural collapse, crane collapse, earthquake, explosion, fire. **Lidoran supervisor or leading hand** will direct all workers to proceed without delay to :-

Nominated Evacuation Point :-_site office

Alternative Evacuation Point:- front gate

Supervisor to account for all Lidoran staff on site and advise Emergency Services personnel of any missing persons.

LOCATION OF FIRE EXTINGUISHERS

Fire extinguishers are located in company vehicles

Nominated Fire Warden: Jonathan Bunting

If a fire occurs on site, investigate and try to contain the fire. Do not place yourself at risk. If the fire is uncontrollable, notify the site office/security and call the fire brigade. Proceed directly to Nominated or Alternative Evacuation Point

**Do not return to the work zone until instructed by your supervisor.
Do not go home unless instructed by your supervisor.**

DRAFT COMMUNITY MANAGEMENT STATEMENT

SOLAR ENERGY SYSTEM

**QUILA ROAD
GUNNEDAH**

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Approved Form 28

COMMUNITY LAND DEVELOPMENT ACT 1989

COMMUNITY LAND MANAGEMENT ACT 1989

COMMUNITY MANAGEMENT STATEMENT

WARNING

The terms of this Management Statement are binding on the Community Association, each subsidiary body within the community scheme and each person who is a proprietor, lessee, occupier, or mortgagee in possession of a community development lot, precinct development lot, neighbourhood lot or strata lot within the community scheme.

PART 1 - BY-LAWS FIXING DETAILS OF DEVELOPMENT

These By-Laws relate to the control and preservation of the essence or theme of the Community Scheme and as such may only be amended or revoked by a resolution of the Community Association in accordance with Section 17(2) of the Community Land Management Act 1989.

BY-LAW 1: DESCRIPTION OF THE DEVELOPMENT

1. The Community Parcel is to contain a 27 megawatt solar energy generating facility. Each Lot will contain a 100 kilowatt array of solar panels.
2. The electricity generated by solar panels will be transmitted to an electrical sub-station which will subsequently feed the electricity into the adjacent 33 kva electricity transmission line.
3. Each Lot will contain a solar energy module which will consist of:-
 - (a) Photovoltaic modules and these modules will consist of 330 panels, with each panel generating 300 watts; and
 - (b) A micro inverter which will convert the direct current to alternate current.
4. Each module will be connected by a network of electrical cables to the sub-station.
5. All of the lots will contain an access track which will be used to access all of the lots for the purpose of allowing maintenance of the modules and any associated electrical cabling.
6. The electricity generated by the solar panels will be transmitted to the junction box situated within each Lot. From there the electricity will then be transmitted to the sub-station via a network of underground cabling. The electricity will then be sold onto the State's electrical grid network and transmitted from the sub-station.

BY-LAW 2: OPERATIONAL LIFE

1. The operational life of the solar energy system will be 25 years from the date of commissioning of the solar energy generating facility. Accordingly, after the solar energy system ceases to be operational the Community Scheme, which has been established to support this operation, will become irrelevant. At this time the Community Association will be obligated to take the necessary actions in accordance with the Community Legislation to terminate the Community Scheme so that the land can then be used for other purposes.

Unlike the Strata Legislation, a unanimous resolution is not required to be passed by the Community Association in order for it to instigate the termination process. This Community Management Statement will bind the Community Association to commence the proceedings at the appropriate time.

2. In order to commence the termination process the Community Association must, in accordance with Section 71 of the Community Land Development Act make application to the NSW Supreme Court. The reason, to be stated in the application, for the termination of the Community Scheme is that the solar energy farm is no longer technologically viable and hence no longer commercially sustainable.

3. Section 71 requires that the Registrar General is joined as a party to the termination application lodged with the Supreme Court. The Court has the discretion to join the consent authority to the application so that the consent authority's views are taken into consideration.
4. The Supreme Court order to terminate the Community Scheme will consider the following issues:-
 - The discharge of rights and liabilities under the Community Association and its members;
 - The disposal of the assets of the Community Association;
 - The winding up of the Community Association;
 - The registration of a new subdivision plan or reversion to a former subdivision plan; and
 - Any other matter that the Court considers to be appropriate, just and equitable in the circumstances.
5. After the Supreme Court has issued the order to terminate the Community Association, the following information is to be lodged at the Land Titles Office:-
 - The prescribed request form;
 - A certified copy of the order;
 - The certificate of title for the association property; and
 - The certificate of titles for all of the other lots.

Upon registration of the request for termination:-

- The association will be dissolved and the scheme terminated;
- The certificates of title for the lots and association property will be cancelled;
- New certificates will issue as required by the order with regard to registered proprietors, mortgagees etc.; and
- The new titles will either be in terms of the parcel(s) which existed prior to the scheme or the lot(s) in a new plan.

PART 2 - RESTRICTED COMMUNITY PROPERTY

These By-laws may only be amended after the expiry of the initial period by a special resolution and with the written consent of each person entitled by the By-law to use the restricted Community Property (see Section 54 Community Land Management Act 1989).

There is no restricted Community Property within this Community Scheme.

PART 3 - MANDATORY MATTERS

BY-LAW 3: OPEN ACCESS WAYS OR PRIVATE ACCESS WAYS

1. There will be no open access ways within the Community Property.

BY-LAW 4: PERMITTED USES OF AND SPECIAL FACILITIES ON THE COMMUNITY PROPERTY

1. An electrical sub-station will be situated on the common property. This sub-station will increase the voltage of the solar generated electricity from 22,000 volts to 33,000 volts. The sub-station will be located within a building which will also contain the necessary transformers and associated high voltage switch gear.
2. Within the Community Property will there be Electrical Infrastructure to transmit the solar generated electricity to sub-station as well the electrical infrastructure needed to transmit the 33,000 volt electricity to the overhead transmission network.

BY-LAW 5: INTERNAL FENCING

1. A lot owner will not be permitted to erect a fence on any lot boundary or anywhere within the owner's lot.
2. Any fence which needs to be erected within the Community Parcel will be erected by the Community Association and maintained by the Community Association. It is envisaged that any such fencing will be for security and safety purposes and particularly for the security of the Electrical Infrastructure.

BY-LAW 6: GARBAGE

1. The Community Association will adopt and implement a waste management plan in order to facilitate the disposal of any waste generated from the site. The waste management plan is to conform with the waste management plan which forms part of the construction environmental management plan which was prepared for the development of the solar energy system.

BY-LAW 7: SERVICES

1. The following services may be made available to the Community Parcel.
 - a) Security;
 - b) Telecommunications;
 - c) Electricity (other than Electrical Infrastructure);
 - d) Water;
 - e) Sewerage;
 - f) Stormwater; and
 - g) Gas

2. The Community Association will maintain and repair or procure the maintenance and repair of all the service Lines.
3. Statutory easements will be created (where appropriate) with respect to the Service Lines.
4. Where any Service is not provided by a statutory authority the Community Association shall be responsible for providing and maintaining such Service.
5. Where any Service is provided by the Community Association appropriate easements will be created with respect to the Service Lines relating to such Services.
6. The Community Association is responsible for paying the accounts rendered to the Community Association by any external service provider.

BY-LAW 8: INSURANCE

1. The Community Association enter into insurance contracts as required by the Community Land Management Act. These insurance contracts are to cover:-
 - (a) A replacement and reinstatement building insurance for all of the improvements on the Community Association property.
 - (b) A Workers Compensation.
 - (c) A public liability insurance policy for the amount prescribed by the Management Act.
 - (d) Voluntary Workers Accidents.
2. The Community Association will enter into insurance contracts to cover all of the Lots for:-
 - (a) Building insurance with replacement and reinstatement cover for all of the electrical infrastructure on each lot.
 - (b) Public liability insurance for the amount prescribed by the Management Act.
 - (c) Workers compensation policy.

These insurance contracts are in accordance with Section 16 of the Insurance Contracts Act.
3. The notice of an annual general meeting must:
 - (a) Include a form of motion to decide whether insurance is affected by the Community Association should be confirmed, varied or extended.
 - (b) Include at least once every five years a motion to obtain a written valuation for all buildings, improvements and electrical infrastructure within the Community Parcel and such valuation should be carried out by a valuer as prescribed by the Management Act.
4. The valuation obtained in accordance with 8.3 (b) will be the minimum amount of building insurance that the Community Association has over the Community Parcel.
5. The Community Association must affect new insurances should circumstances change with regard to the Community Parcel and its electrical infrastructure.

6. A lot owner or a contractor must not do anything to adversely affect insurances affected by the Community Association.

BY-LAW 9: EXECUTIVE COMMITTEE

CONSTITUTION

1. The Executive Committee of the Community Association must be established in accordance with Division 2 of Part 2 of the Management Act.

CONDUCT

2. The Executive Committee must conduct itself in accordance with the Management Act.

MEETINGS

3. Subject to By-Laws 9.8 and 9.9 the Executive Committee may meet to conduct business, adjourn and otherwise regulate its meetings as it thinks fit.

NOTICE OF MEETINGS

4. The Secretary or the member of the Executive Committee who convenes a meeting must, not less than 24 hours immediately before the Executive Committee holds a meeting, display on the noticeboard.
 - (a) The notice of intention to hold the Meeting; and
 - (b) The proposed agenda for the meeting.

MEETING AGENDA

5. The agenda for a meeting must include details of all business to be dealt with at the meeting.
6. No business may be dealt with at a meeting unless details of that business are set out in the agenda for that meeting.

PLACE OF MEETING

7. Meetings will be held at a venue which is determined by the majority of the Executive Committee members to be a suitable venue.

MEETING AT REQUEST OF MEMBERS

8. The Secretary or in the Secretary's absence, any member of the Executive Committee must, at the request of not less than one-third of the members of the Executive Committee, convene a meeting within a period of time specified in the request or, if no time is specified, within fourteen (14) days of the making of the request.

OUT OF MEETING DETERMINATION

9. Where:-
 - (a) By-Law 9.4 has been compiled with in relation to a meeting;

- (b) Each member of the Executive Committee has been served with a copy of a motion for a proposed resolution to be submitted at the meeting; and
- (c) The resolution has been approved in writing by a majority of members of the Executive Committee;

then the resolution will, subject to Section 38(3) of the Management Act, be as valid as if it had been passed at a duly convened meeting of the Executive Committee even though the meeting was not held.

RIGHT OF PROPRIETOR TO ATTEND MEETING

- 10. A proprietor of a Lot or, where the proprietor is a corporation, the company nominee of the corporation may attend a meeting but may not address the meeting unless authorised by a resolution of the Executive Committee.

MINUTES OF MEETING

- 11. Minutes of meetings must be kept properly and held with the minutes of the General Meetings of the Community Association.

FUNCTIONS OF THE SECRETARY

- 12. The functions of the Secretary include:-
 - (a) Preparing and distributing minutes of meetings of the Community Association and the Executive Committee;
 - (b) Giving, on behalf of the Community Association and the Executive Committee, notices required to be given under the Management Act;
 - (c) Maintaining the Community Association roll;
 - (d) Supplying certificates in accordance with Clause 2 of Schedule 4 of the Management Act;
 - (e) Answering communications addressed to the Community Association or the Executive Committee;
 - (f) Convening meetings of the Executive Committee and the Community Association other than the first Annual General Meeting;
 - (g) Performing administrative or secretarial functions on behalf of the Community Association;
 - (h) Performing administrative or secretary functions on behalf of the Executive Committee; and
 - (i) Keeping records under Part 3 of Schedule 1 of the Management Act.

FUNCTIONS OF THE TREASURER

- 13. The functions of the Treasurer include:-
 - (a) The functions set out in Section 36(1) and (2) of the Management Act;
 - (b) Notifying proprietors of Lots of any contributions levied under the Management Act;

- (c) Receiving, acknowledging, banking and accounting for any money paid to the Community Association;
 - (d) Preparing any certificate applied for under paragraphs (b), (c), (d), (e) and (f) of Clause 2 of Schedule 4 of the Management Act;
 - (e) Keeping prescribed accounting records under Clause 10 of Schedule 1 of the Management Act;
 - (f) Preparing financial statements under Clause 11 of Schedule 1 of the Management Act; and
 - (g) Notifying proprietors of Lots of any contribution levied under this Management Statement and collecting such contribution.
14. The Executive Committee may, from time to time, appoint sub-committees comprising of one or more of its members to:-
- (a) Conduct investigations;
 - (b) Perform duties and functions on behalf of the Executive Committee; and
 - (c) Report the findings of the Sub-committee to the Executive Committee.

NO REMUNERATION

15. Members of the Executive Committee are not entitled to any remuneration for the performance of their functions, but are entitled to reimbursement for reasonable out of pocket expenses incurred by them in the performance of their functions.

PROTECTION OF EXECUTIVE COMMITTEE MEMBERS FROM LIABILITY

16. No member of the Executive Committee will be liable for any loss or damage occurring by reason of an act done in his capacity as a member of the Executive Committee except where the loss or damage occurs as a result of fraud or negligence on the part of that member.

DELEGATION OF DUTIES

17. In accordance with Section 50 of the Community Land Management Act the Association may delegate the functions of Secretary and Treasurer to a managing agent.

PART 4 - OPTIONAL MATTERS

BY-LAW 10: ASSOCIATION PROPERTY

1. The proprietor of a Lot must not without the prior consent of the Association interfere with or obstruct the use of Association Property.
2. The proprietor of a Lot must not do or permit anything that might damage Association Property.
3. Should it become apparent, the proprietor of a Lot must promptly notify the Association of any damage to or defect in Association Property.

BY-LAW 11: NO INAPPROPRIATE USE

1. The proprietor of a Lot must not use anything on the Community Parcel for any purpose other than that for which it was intended.

BY-LAW 12: COMMUNITY ASSOCIATION'S RIGHT TO ENTER INTO CONTRACTS – MANAGEMENT AGREEMENT

The Community Association may, contract with persons to:-

- (a) Provide management, operational, maintenance and other services and amenities in connection with Association Property; and
- (b) Provide services or amenities to the proprietors of Lots.

BY-LAW 13: COMMUNITY ASSOCIATION'S RIGHT TO MAINTAIN SERVICES

1. Subject to Section 60 of the Management Act, the Community Association and persons authorised by it, may enter a Lot at all reasonable times to maintain, repair, alter, add to, increase the capacity of, or renew Private Services.

BY-LAW 14: COMMUNITY ASSOCIATION'S RIGHT TO RECOVER MONEY

The Community Association may recover any money owed to it under these By-Laws as a debt.

BY-LAW 15: REIMBURSEMENT OF COSTS, CHARGES AND EXPENSES

1. A proprietor of a Lot must pay or reimburse the Community Association on demand for any expenses of the Community Association in connection with the contemplated or actual enforcement or preservation of any rights under these By-Laws in relation to the proprietor.

BY-LAW 16: COMMUNITY ASSOCIATION NOT LIABLE FOR DAMAGES

The Community Association is not liable for damage to or loss of property or injury to any person in or near the Community Parcel due to any cause other than the negligence or fraud of the Community Association or any employee or agent of the Community Association.

BY-LAW 17: RULES

1. The Community Association may make Rules relating to the control, management, operation, use and enjoyment of the Community Parcel.
2. The Community Association may at any time add to or change the Rules. An addition or change to a Rule must not be inconsistent with the Management Act, the Development Act or these By-Laws.
3. Rules bind a proprietor, mortgagee as in possession and lessee of a Lot.

BY-LAW 18: COMPLIANCE WITH REQUIREMENTS OF AUTHORITIES

A proprietor of a Lot must comply on time with all requirements and orders of authorities and all laws in connection with the Lot and the use or occupation of that Lot.

BY-LAW 19: NOTICES TO BE OBSERVED

A proprietor of a Lot must comply with the terms of any notice displayed on Community Property by the Community Association, a Service Provider or other relevant authority.

BY-LAW 20: INSTRUCTING CONTRACTORS

A proprietor of a Lot must not directly or indirectly instruct agents, employees or contractors of the Community Association unless authorised to do so by the Community Association.

BY-LAW 21: COMMUNICATIONS WITH COMMUNITY ASSOCIATION

Any complaint, notice, request or application to the Community Association must be addressed in writing to the Managing Agent or, if a Managing Agent has not been appointed, to the Secretary.

BY-LAW 22: COMMUNICATIONS FROM COMMUNITY ASSOCIATION

Any notice, approval or authorisation by the Community Association under these By-Laws must be in writing.

BY-LAW 23: ACCESS TO LOTS

The Community Association and its authorised persons have unfettered access to all of the Lots for the purpose of operating and maintaining the Electrical Infrastructure within each Lot.

The access to each Lot will be via a network of unsealed tracks suitable for transporting maintenance vehicles. The Community Association will have the responsibility of maintenance of these tracks so that they are always able to be accessed by maintenance vehicles. Due to safety concerns if a proprietor wishes to inspect their Lot it is essential that the proprietor is escorted to the Lot by an authorised person who has the appropriate safety and security clearances.

BY-LAW 24: MAINTENANCE AND OPERATION OF THE SOLAR ENERGY SYSTEM ON THE LOTS

The obligations of the Community Association in relation to the infrastructure on each Lot and the Community Association Property are as follows:-

- (a) Maintain all the Electrical Infrastructure in a good serviceable order and condition.
- (b) Operate the Electrical Infrastructure in the most optimal manner.
- (c) Replace any part of the Electrical Infrastructure which, due to general usage needs to be replaced.

The Community Association may enter into a contract with the appropriate persons to operate and maintain the Electrical Infrastructure.

BY-LAW 25: TRADING ACTIVITIES

The Community Association, for the purposes of exercising and performing its function will carry on a business as a generator of electricity from solar cells and as a vendor of the electricity produced.

The Community Association in carrying out these trading activities:-

- (a) Must pay into its administrative fund income derived from its trading activities.
- (b) Must prepare budgets to estimate how much money it will need to credit to its administrative and its sinking fund to meet expenses associated with the carrying on of the trading activities and must make an estimate as a budget to a general meeting of the Community Association that is to consider the Association's financial circumstances on an annual basis.
- (c) Must impose a levy on each member for contribution to provide any funds required to meet the administrative and sinking fund budgets.
- (d) May distribute any net profit derived from the trading activities in accordance with the Management Act.

BY-LAW 26: USE OF A LOT

The proprietor of a Lot is not permitted to use that Lot for any other purpose than for solar generation of electricity in accordance with Development Consent No: 2015/062.

PART 5 - BY-LAWS REQUIRED BY PUBLIC AUTHORITIES

Not applicable.

PART 6 - DEFINITIONS, INTERPRETATION AND GENERAL

BY-LAW 27: INTERPRETATION

The following words have these meanings in the By-Laws unless the contrary intention appears:-

1. **ANNUAL GENERAL MEETING** - means the Annual General Meeting of the Community Association other than the First Annual General Meeting.

ASSOCIATION - means the Community Association.

ASSOCIATION PROPERTY - means the Community Property in the scheme and all things located thereon.

AUTHORISED PERSON - means a person on the Community Parcel with the consent express or implied of the Community Association.

BY-LAW - means a By-Law included in this Management Statement.

COMMUNITY ASSOCIATION - means a corporation that:-

- (a) Is constituted by Section 25 of the Development Act or the registration of the Community Plan; and
- (b) Is established as a Community Association by Section 7 of the Management Act.

COMMUNITY LOT means land that is a Lot in a Community Plan that is not Community Property, a public reserve or a drainage reserve.

COMMUNITY PARCEL - means the land the subject of a Community Scheme.

COMMUNITY PLAN - means the plan of subdivision registered with the Management Statement from time to time added to, modified or amended in accordance with the Community Titles Legislation.

COMMUNITY PROPERTY - means the lot shown in a Community Plan as Community Property.

COMMUNITY SCHEME - means:-

- (a) The subdivision of land by a Community Plan;
- (b) The proposals in any related development contract; and
- (c) The rights conferred, and the obligations implied, by or under the Community Titles Legislation in relation to the Community Association, Community Property and the proprietors and other persons having interests in, or occupying Community Lots.

COMMUNITY TITLES LEGISLATION - means the Development Act, the Management Act and cognate legislation.

COUNCIL - means the Gunnedah Shire Council.

ELECTRICAL INFRASTRUCTURE – means all of the infrastructure, equipment and devices on the Community Parcel which are used for the generation and transmission of electricity including but not limited to photovoltaic solar arrays, solar panels, micro inverters, electrical junction boxes, switch gear, electrical sub-station, the building in which the electrical sub-station is housed, underground and overhead electrical cables and the access road network throughout the Lots.

EXECUTIVE COMMITTEE - means the Executive Committee of the Community Association as constituted or elected from time to time under the Management Act.

FUNCTION - includes a power, authority or duty.

GENERAL MEETING - means an Annual General Meeting or special General Meeting of the Community Association.

LOT - means a Community Lot.

MANAGEMENT ACT - means the Community Land Management Act, 1989 and regulations made under it.

MANAGING AGENT - means an agent appointed under Section 50 of the Management Act.

MANAGEMENT STATEMENT - means the statement registered with the Community Plan from time to time added to, modified or amended in accordance with the Community Titles Legislation.

ORIGINAL PROPRIETOR - has the same meaning as in the Development Act.

PRESCRIBED DIAGRAM - means the diagram relating to the Services Lines with the Community Plan and prescribed in Section 36 of the Development Act.

RULES - means the rules made under By-Law 17.

SECRETARY - means the Secretary of the Community Association.

SERVICE - means a statutory service or private service.

SERVICE LINE - means a pipe, wire, cable, duct, conduit or pole by means of which a service is or is to be provided, the location of which is illustrated in the prescribed diagram.

SERVICE PROVIDER - means, with limitation, Telstra, Telecom Australia, the Council and any authorities or corporations assuming similar functions.

SINKING FUND - means the sinking fund referred to in Section 12, Part 4 of Schedule 1 of the Management Act.

STATUTORY SERVICE - means a service running through or servicing Lots or Association Property provided by a Service Provider.

TREASURER - means the Treasurer of the Community Association.

2. In these By-Laws, unless the contrary intention appears:-

(a) A reference to the singular includes the plural and vice versa;

- (b) A reference to a statute includes any variation, amendment, re-enactment or replacement of it;
 - (c) The word “person” includes a firm, an association or an authority;
 - (d) Reference to a person includes a reference to the person’s executors, administrators, successors and assigns;
 - (e) A reference to an instrument includes any variation or replacement of it;
 - (f) A reference to a day is a reference to the period of time commencing at midnight and ending 24 hours later; and
 - (g) Headings are inserted for convenience and do not affect the interpretation of this Management Statement.
3. Un-enforceability of a part or provision of these By-Laws does not affect the enforceability of any of the part or provision.
4. The Community Association may exercise a right, power or remedy at its discretion, and separately or concurrently with another right, power or remedy. A single or partial exercise of a right, power or remedy by the Community Association does not prevent a further exercise of that or of any other right, power or remedy. Failure by the Community Association to exercise or delay in exercising a right, power or remedy does not prevent its exercise.
5. A reference to an authority, institute, association or body or to any officer of them is in the event of that authority, institute, association, body or officer ceasing to exist or being reconstituted, re-named or replaced or of their respective powers or functions being transferred to any other organisation or person deemed to be a reference to the organisation or officer established, constituted or appointed in lieu of or as replacement for or which or who serves substantially the same purposes or subject of that authority, institute, association, body or officer.

SIGNATURES, CONSENTS AND APPROVALS

Executed by Ironbark Energy Pty Limited in)
Accordance with Section 127 of the)
Corporations Act 2001)

Signature of Director

Signature of Secretary

Name of Director
(BLOCK LETTERS)

Name of Secretary
(BLOCK LETTERS)

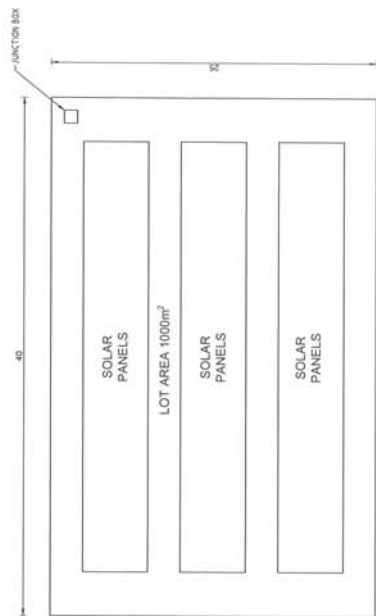
CERTIFICATE OF APPROVAL

It is certified:-

- (a) That the consent authority has approved of the development described in Development Application No. 2015/062; and
- (b) That the terms and conditions of this Management Statement are not inconsistent with that development as approved.

Date: _____

Signature on behalf of Gunnedah Shire Council: _____



100kW MODULE & LOT LAYOUT
SCALE 1:200(A1)
SCALE 1:400(A3)

NOTE:
EACH OF THE 272 COMMUNITY TITLE
LOTS (NUMBERED 25-298) HAVE
UNIFORM DIMENSIONS OF 40m x 25m
AND EACH LOT CONSTITUTES A
SINGLE 100kW MODULE



NOTE:
LOT DIMENSIONS AND AREAS
ARE SUBJECT TO CADASTRAL
GROUND SURVEY.

PROPOSED SOLAR MODULE AND LOT LAYOUT	
PROJECT NUMBER	214358
DRAWING NUMBER	01N_TP04
REV	N
SOURCE	INTERNAL

IRONBARK ENERGY PTY LTD

GUNNEDAH SHIRE COUNCIL

PROPOSED SOLAR ENERGY SYSTEM
INCLUDING SUBDIVISION

NO	DATE	LOCATION	REVISION	DETAILS
1	21/04/15	2D	DW	ISSUED TO CLIENT
2	02/06/15	MY	DW	REVISED LOT LAYOUT
3	26/06/15	BP	DW	MODULE ELEVATIONS ADDED TO SET
4	12/08/15	MY	DW	PROPOSED LOT DIMENSIONS ADDED
5	26/08/15	MY	DW	PROPOSED SERVICES SOURCE ADDED
6	09/10/15	MY	DW	MAJOR AMENDMENTS
7	19/12/15	MY	DW	MINOR AMENDMENTS

GEOLYSE
ORANGE
15 WHEELER STREET
ORANGE NSW 2800
orange@geolyse.com
www.geolyse.com

272 X 100 KW MODULES
PROPOSED LOT BOUNDARY

LEGEND:

